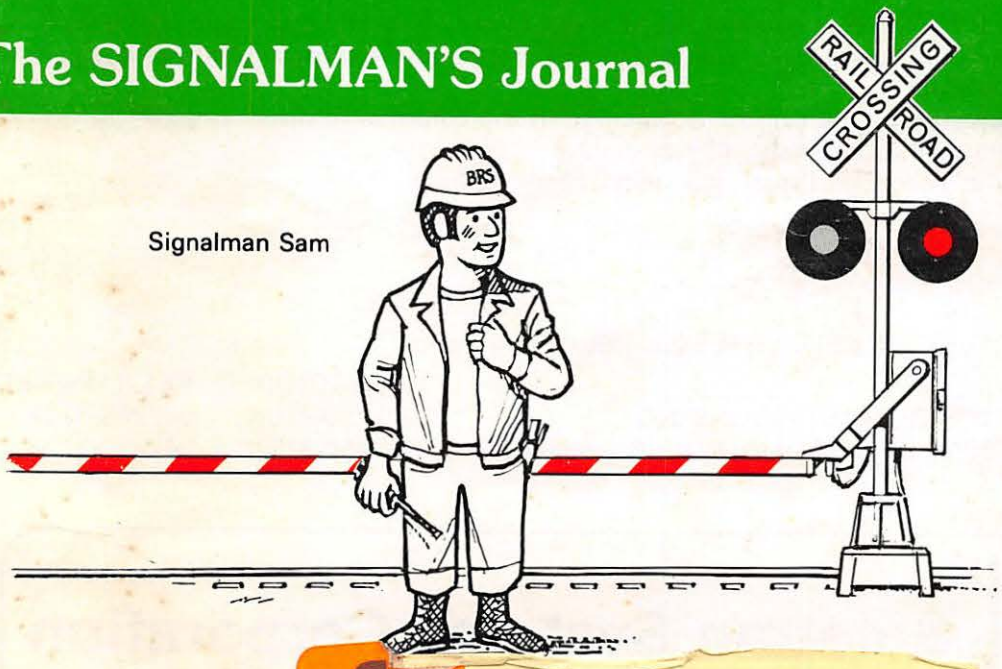
The SIGNALMAN'S Journal

BROTHERHOOD OF RAILROAD SIGNALMEN
FOUNDED 1901
AFL CIO CLC

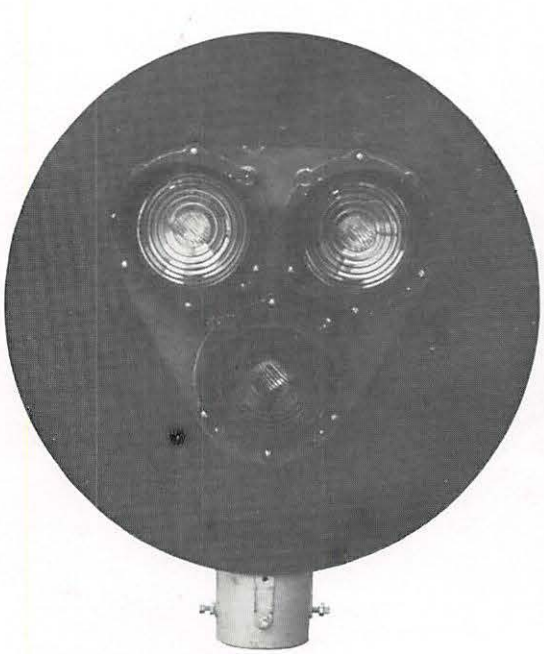


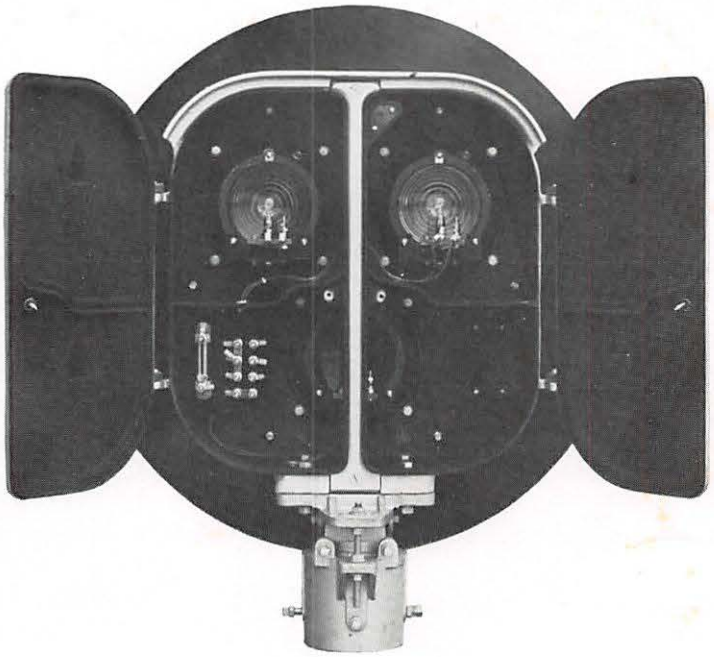
Signalman Sam

Over 50,000 rail-highway grade crossings are equipped with active warning devices. New law passed by 95th Congress will provide funding for four more years of warning device installations.

NOVEMBER 1978

TYPE V COLOR LIGHT SIGNAL





The Type V Signal is a long range color light signal capable of displaying one or more colored lights.
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Weight of complete assembly for top of mast — 5" mounting — 88 lbs.
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SIDE OF MAST MOUNTING ASSEMBLY	042250-312X	042250-313X

Safetran Systems Corporation
7721 National Turnpike • Louisville, KY 40214 • (502) 361-1691

Volume 59 Number 9 November 1978

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Signalman's Store

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	Medium		12.00	
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Master Nat'l. Agreement Bk.			7.95	
General Chairman and Local Chairman's Manual			3.00	
TOTAL AMOUNT ENCLOSED				

Minimum order accepted is $5.00

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CLOTH EMBLEM with BofRS in white letters on red border, two locomotives, and green over red searchlight signal.

COASTERS with BofRS emblem come in red, white and green; 3-inch diameter.

PLAYING CARDS with BofRS emblem are now available. These high quality cards come in the conventional bridge decks, including jokers. Cards and emblems are in color.

GOLF CAPS with BofRS in color are available in small, medium or large with adjustable head band. These lightweight net caps come in red, black or white.

The eight-volume **SIGNALMAN'S TRAINING COURSE** covers the following subjects:

1. Electricity, circuit symbols and nomenclature
2. Signal symbols and nomenclature
3. Automatic block signaling, time code control, electronics
4. Traffic control systems and power switch machines
5. Highway grade crossing warning systems, FRA RS&I tests
6. Remote control and automatic interlockings
7. Ctc machines and their operation
8. Maintenance of signal equipment

SIGNALMEN'S DECAL has adhesive backing so it can be applied to glass, leather, metal, etc. for BofRS identification on car windows, bumpers, luggage, hard hats, etc. The emblem is 4-inches or 3-inches in diameter. It has a red border with white letters. The signal displays green over red.

Metal **COLORLIGHT SIGNAL LAPEL PIN** 1/2-inch in diameter with signal showing green over yellow over red on white enamel background. Signal and pin outlined in gold.

BofRS **LAPEL PIN** identical to decal except letters and outline are in gold.

Red nylon **WINDBREAKERS** with elastic sleeve ends that fit tight to the wrists and with a drawstring at the bottom to pull tight to the waist come in three sizes: small (36-38); medium (40-42); and large (44-46). Two slash pockets and a cloth BofRS patch on the left front complete these men's jackets. The windbreaker is machine or hand washable in warm water.

A **HISTORY OF THE BROTHERHOOD OF RAILROAD SIGNALMEN** has been written by the late A. E. Lyon, president emeritus, which covers the 75 years of the Brotherhood since its founding in 1901.

MASTER NATIONAL AGREEMENT BOOK has the basic provisions of national agreements negotiated with U.S. railroads and the BofRS. They are contained in a loose-leaf binder with 2-inch rings so there is room for additional material, such as local agreements. The 23 sections are:

A Summary of wage changes
B Summary of other benefits
C Washington job protection agreement of 1936
D Vacations
E Union shop agreement
F Holidays
G Claim and grievance handling
H Health and welfare
I Force reductions
J Employment security
K Travel time and away-from-home expenses
L Off-track vehicle accidents
M Jury duty
Mc Current agreement
N Overtime
O Camp cars
P Apprentice programs
Q Change of residence
R Earnings deduction in discipline cases
S Supplemental sickness benefits
T Union dues checkoff
U Amtrak C-1, C-2
V Seniority modification agreement

News

Board will not pay 6-day strike benefits

The Railroad Retirement Board will not be paying benefits for unemployment caused by the September 26 strike called by the Brotherhood of Railway and Airline Clerks (BRAC) on 43 railroads. Under the Railroad Unemployment Insurance Act, no benefits can be paid for an employee's first seven days of unemployment resulting from a legal strike. The strike, which began on September 26 and ended October 1, lasted for only six days and such days cannot be included in any claim with other days of unemployment.

The Board has paid $4,877,000 in benefits to employees on strike against the Norfolk and Western from July 10 through October 1, 1978, and $19,367,000 to other Norfolk and Western employees out of work because of the strike.

NTSB wants series circuit to replace shunt fouling

After investigation of a Southern train accident, the National Transportation Safety Board recommends to Federal Railroad Administration the shunt fouling circuits at hand-throw switches be replaced with "a series break-type circuit." NTSB safety recommendation R-78-23 follows:

About 2:53 a.m. on October 8, 1977, Southern Railway Company passenger train No. 1, The Crescent, entered a crossover from the main track into the Spencer Yard at Spencer, North Carolina, and sideswiped freight cars which were being assembled as train No. 152 on an adjacent yard track. Four locomotive units and five cars of The Crescent and seven cars of train No. 152 were derailed. Twenty-six persons received minor injuries and damage was estimated to be $250,000.

The Safety Board's investigation of the accident found that The Crescent received a clear (green) aspect on signal 330.7, which governed the entrance to the signal block in which the crossover was located. Southern Railway used a shunt circuit imposed on the track by contact closure in a switch-operated circuit controller. Though one contact in the circuit controller was never observed to fail during tests, two other incidents were revealed in which the circuit controller failed to shunt the track to produce a red signal aspect on the governing signal. These reports lead the Safety Board to conclude that the circuit controller failed to shunt the track.

The application of the circuit controller in the shunt circuit configuration is not in accordance with the Federal Railroad Administration's Rules, Standards, and Instructions which state that "all control circuits the functioning of which affects safety of train operation shall be designed on the closed circuit principle. . . ." The shunt circuit as applied does not provide this protection, nor does it provide broken rail protection between the point of application and the governing signal.

As a result of this investigation, the National Transportation Safety Board recommends that the Federal Railroad Administration:

Require that the track shunt circuit imposed by contact closure in a circuit controller be phased out as soon as practicable and a series break-type circuit, which will satisfy the requirements of the FRA's Rules, Standards, and Instructions, be used in place thereof.

Signalmen and ConRail agree on wages, etc.

Brotherhood of Railroad Signalmen and Consolidated Rail Corp. have agreed to adopt the terms and conditions of the mediation agreement reached between the Brotherhood and the National Railway Labor Conference on July 27, 1978. A copy of the agreement was published in the July-August 1978 issue of The Signalman's Journal.

Also, the BofRS and ConRail have agreed to continue negotiations to conclude a new collective bargaining agreement as required under Section 504 (d) of the Regional Rail Reorganization Act. If the new agreement is not completed by April 15, 1979, BofRS and ConRail will appoint members of an arbitration panel to continue working on the collective bargaining agreement, which hopefully could be completed by August 1, 1979.

The agreement setting up time limits for negotiating a new collective bargaining agreement and accepting the July 27, 1978 National Mediation Agreement was signed on September 19, 1978. Representing the BofRS were Vice President Joseph W. Walsh, and General Chairmen Bernard E. Britcher, W. P. Glavey, C. T. Heitzman, Stephen J. Muzi Sr., and L. J. Ryder. Signing for ConRail was R. E. Swert, assistant vice president, labor relations.

DOT to electrify 15.8 miles of track

At its Transportation Test Center in Pueblo, CO, the Department of Transportation will electrify 15.8 miles of track.

The new overhead power system (catenary), substation and transmission and feeder lines will enable researchers to test and evaluate freight and passenger electric locomotives, as well as multiple unit cars such as the Metroliners that are used for rail passenger service.

The $3,386,208 project is being funded by the Federal Railroad Administration's Northeast Corridor Improvement Project, which will upgrade electrified rail passenger service between Boston and Washington, D.C.

The electrification contract was awarded to Fischbach & Moore, Inc. of New York City and Denver.

The electrified track will be used

to analyze fixed electrification equipment including alternate catenary configurations, as well as signal and communications equipment. Designs for the catenary system will be compatible with equipment used in Northeast Corridor.

The system when installed will provide voltages applicable to the planned corridor system, including 25,000 and 12,500 volts and will permit test speeds over 120 miles per hour. The track will contain a one-mile section for testing a variety of catenary designs. This will be accomplished by rolling the catenary being tested into position over the rail and will not affect the permanent catenary being used for the entire track.

In June 1978, the Westinghouse Electric Corporation was awarded the contract for the transformer, a unique system capable of providing three separate voltages to the track.

MP applies to FRA to install ctc

Missouri Pacific has applied to the Federal Railroad Administration for approval to install a traffic control system on approximately 139 miles of line. MP proposes to install ctc between Roper and Dearing, KS and between Coffeyville, KS and Fort Gibson, OK. Additionally, MP has asked FRA for release from Section 236.21 of the signal rules, standards and instructions, to install 20 signals to the left of the track governed.

FRA buys C&NW shares to fund rehab work

Federal Railroad Administration has agreed to buy $122.9 million of Chicago & North Western Transportation Co. preference shares to finance rehabilitation work on the road's Chicago, IL to Fremont, NE mainline. The project is the first 4-year rehabilitation program to be funded under Title V, Section 505, of the 4R Act of 1976. In addition to major track work, centralized traffic control will be installed between Missouri Valley, IA and Fremont, NE, 38 miles. Also, included in the program are track and signal improvements at C&NW's Proviso yard near Chicago.

DOT to buy B&M paper to fund rehab project

The Department of Transportation has agreed to buy $26 million in trustee certificates from the reorganization trustee of the Boston & Maine Corp. to help the railroad upgrade 153 miles of mainline between Boston, MA and Mechanicville, NY. Included will be rehabilitation of 64 miles of signaled territory. The B&M will redeem the trustee certificates, which may be converted into preference shares, over a 30-year period.

NY commuter lines get $12 million for signals

A $12,297,200 grant from the Urban Mass Transportation Administration provides for installation of a signal system and track improvements on the ConRail commuter lines in the New York City area. The grant, made to Metropolitan Transportation Authority, also provides for signal and track improvements on the Long Island.

Union Pacific begins new yard at North Platte

Union Pacific has begun construction of a new automatic retarder classification yard at North Platte, NE. The new yard, at a cost of 40.5 million dollars will handle westbound traffic. Construction is expected to take about two years. The new automatic yard will make use of computer technology for the classification of all cars. The new yard will be built on existing land along side the present westbound yard which it will replace.

The new yard will have double the capacity of the present westbound yard. It will include a 50-track classification yard, 8 receiving tracks, 10 departure tracks, 6 south departure tracks for high priority van traffic, and 2 special tracks for coal trains.

Signalmen to get 25¢ raise come January 1

Under the Cost of Living Adjustment Section II of the Mediation Agreement signed July 27, 1978, signal employees will receive a 25¢ an hour increase in pay beginning January 1, 1979. This COLA raise is based upon the changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (Revised Series CPI-W) for the period March-September 1978. During this period, CPI-W rose 9.4 points. However, the agreement says that the increase during this period can be only 4% or 7.6 points. Translated into money, each 3/10ths of a point equals 1¢. Dividing 0.3 into 7.6 results in 25.33¢, which is rounded off to 25¢.

ConRail to add cab signals and ctc on 95 miles

ConRail has asked the Federal Railroad Administration for permission to install additional mileage of centralized traffic control on 95 miles of line between Poughkeepsie and Hoffmans, NY. Also included in the application is to install a 4-indication cab signal system and to respace signals to provide adequate braking distance for high speed trains. The installation is being funded by the State of New York to provide improved rail passenger service. The cab signals will permit Amtrak passenger trains to operate at speeds over 79 mph.

ConRail and L&N to install interlocking

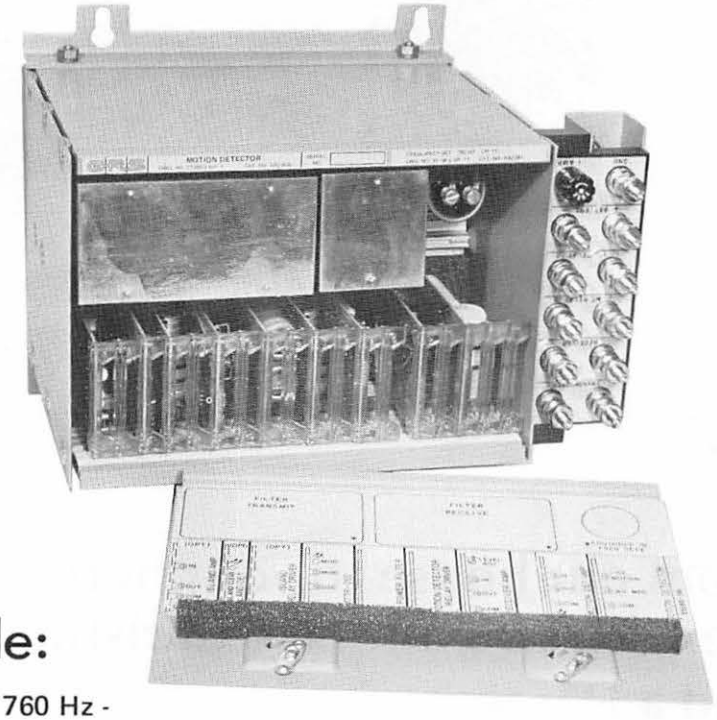
ConRail and Louisville & Nashville have applied to the Federal Railroad Administration to install an automatic interlocking at Crawfordsville, IN. The new plant will replace an existing electro-mechanical interlocking.

GRS Train Motion Detector

"Stops The Horns From Blowing"

The GRS solid-state motion detector provides a reliable and economical means of reducing highway traffic delays during backup and switching moves on crossing approaches.

The motion detector is used with proven approach and island track circuits — d-c or audio frequency— to provide more dependable train detection than a warning system using only a motion detector. It does not need complex checking circuits, thus is simpler in design and easier to maintain. Also, it is easy to include in existing protected crossings.



Major features include:

- Choice of Eight Frequencies - 164 to 760 Hz - compatible with GRS frequency shift overlay frequencies.
- Selectable Sensitivity - low, medium, or high - for electrically noisy conditions.
- Island Track Circuit - optional printed circuit boards plug into the detector; no need for separate island equipment.
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- Trouble Shooting Aids - light emitting diodes on certain printed circuit boards pinpoint trouble areas.
- Convenient Terminations - AAR input/output terminals accessible either from the front or back of the detector.

For more information, contact your GRS sales engineer or write for Product Information PI-61.

GRS

GENERAL RAILWAY SIGNAL
A UNIT OF GENERAL SIGNAL
ROCHESTER NEW YORK 14602

3688

11/58

To all Members of our B of RS family

From our house to your house we wish you a Merry Christmas and a Happy New Year

We wish to express our sincere thanks and appreciation for your continued support of our efforts to maintain our Brotherhood as a vital service organization. We extend our cordial best wishes to you for a joyous Holiday Season and hope that the New Year will bring you health and happiness.

Tom Bates
Walter Altus
Chuck Chandler
Witt Harwell
Joe Walsh
George Harrington
Walt Lauer
John Hansen
Dink Best
John Bass
Pete Frye
John Platt
Bernie Britcher
Tony Cunningham
Bob Mitchell
Bob McKnight

Crossing safety has more funds

Over 50,000 rail-highway grade crossings in the United States are equipped with active warning devices. These include 11,983 crossings equipped with automatic gates and flashing-light signals; 13,969 crossings having flashing-light signals; and 3,395 crossings equipped with highway signals, wigwags or bells. These figures are from a Federal Railroad Administration report of August 1976.

The installation rate of warning systems has been averaging about 2,500 crossings per year in recent years. This activity is largely due to the federal aid highway program. Since 1973, federal funds have been available to states for improvements to increase safety at rail-highway grade crossings.

A new bill has been passed by the 95th Congress which provides for 4 years of funding for grade crossing safety programs. In brief, the bill provides $190 million per year for four years to improve safety at rail-highway grade crossings. Improvements can include better surfaces at the crossings, better signing, brush clearance to improve sight distances, and installation of automatic warning devices and systems. Funding is based on 90% federal and 10% state funds.

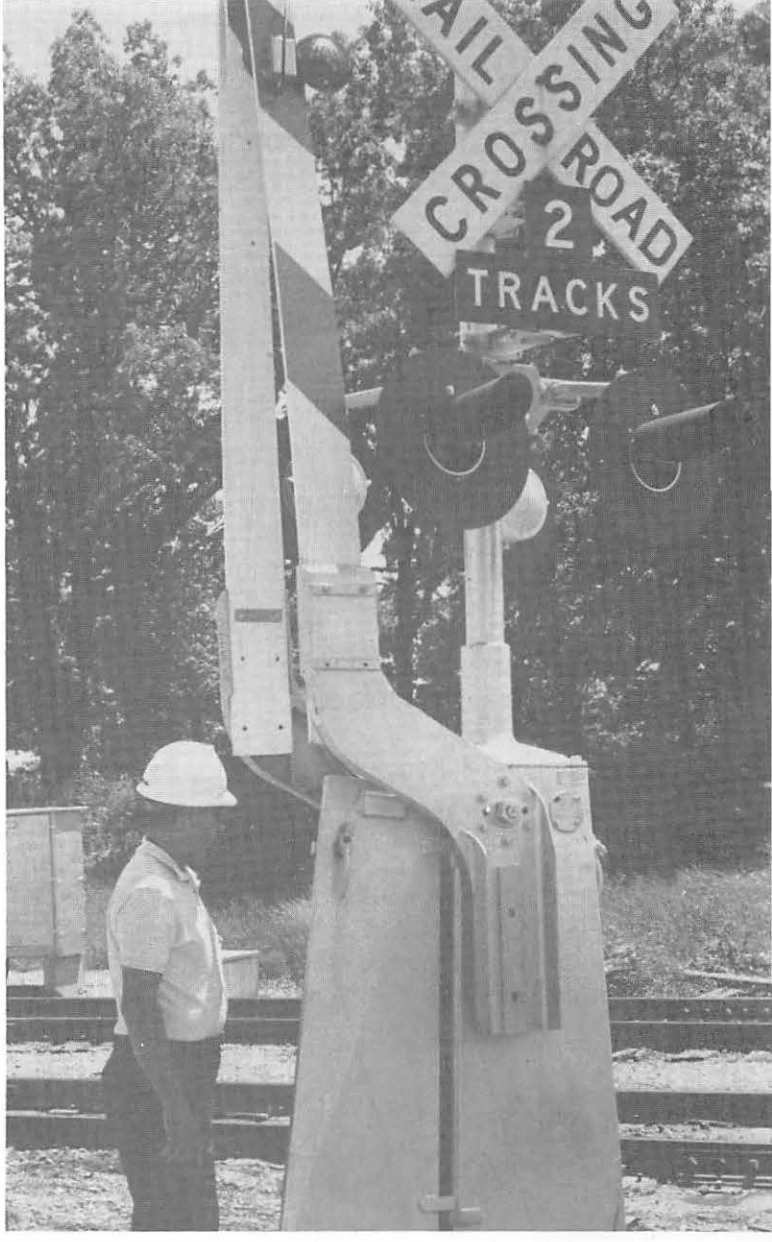
Also of interest are provisions to make no distinction between federal and non-federal highways. This designation in the past limited the amount of money that could be spent to improve safety at grade crossings, depending upon whether the road was part of the federal highway system or a state, county or city road.

The new bill is known as the Surface Transportation Assistance Act of 1978. It covers highways, mass transit and grade crossing safety. The total funds provided are $51 billion for four years. Included are funds to be distributed by the Urban Mass Transportation Administration, which could be used for signal projects on either mass transit lines or railroad commuter lines.

Speaking in support of HR 11733, STAA of 1978, Senator John Culver of Iowa, said:

"The conference report also retains a provision of the Senate highway bill which makes a salutary change in the railroad-highway crossing safety program. Since 1973, Federal funds have been used to make safety improvements—such as installing flashing lights and automatic gates—at railroad crossing sites. Though this program has been of tremendous benefit in reducing the tragic number of deaths and injuries from collisions between motor vehicles and trains, an inequitable distribution formula has prevented some States from receiving a maximum use of this program. The formula is based on a State's population, area, and mailroute mileage, but does not reflect the number of railroad crossings in a State. This discriminates against States with relatively small populations but a large number of crossings. Iowa, for example, has over 10,000 crossings, yet receives less money per crossing than almost any other State.

"HR 11733 contains a provision I introduced in the Committee on Environment and Public Works which makes one-half of the allocation formula dependent



Maintenance of rail-highway grade crossing warning devices is as important as the installation. The tables on the following pages indicate funding for both installation and maintenance.

Allocation of Installation & Maintenance Costs for Rail-Highway Grade Crossing Warning Systems

State or Public Body	Installation Costs State/Railroad		Maintenance Costs State/Railroad		Remarks
Alabama (84G, 587F, 24S)	100%	0%	0%	100%	—
Arizona (115G, 133F, 16S)	100%	0%	0%	100%	—
Arkansas (102G, 412F, 30S) State Highway Commission	100%	0%	0%	100%	—
California (2,186G, 1,506F, 611S)	50%	50%	50%	50%	—
Canada Railway Transport Committee	92.5%	7.5%	50%	50%	Government of Canada contributes $28 million per year for improvement to rail-highway crossings.
Colorado (64G, 376F, 42S)	100%	0%	0%	100%	—
Connecticut (47G, 186F, 8S) Public Utilities Control Authority	100%	0%	0%	100%	—
Delaware (30G, 85F) State Highway Department	By Agreement		By Agreement		Law provides that state can provide up to 100%.
Florida (649F, 971G, 14S) Department of Transportation	100%	0%	50%	50%	—
Georgia (192G, 640F, 24S)	100%	0%	0%	100%	—
Idaho (15G, 190F, 11S)	100%	0%	0%	100%	—
Illinois (1,512G, 2,881F, 243S) Illinois Commerce Commission	90%	10%	0%	100%	ICC has authority to assess any portion to interested parties. Typical assessment—State Fund 70 to 100%; local authority 0 to 10%; railroad 0 to 10%.
Indiana (611G, 2,351F, 183S) Public Service Commission	100%	0%	0%	100%	State pays 10% on state roads. Local governing body pays 10% on off system roads. PSC can by Public Law 66 order installation, relocation, modernization or improvements and prescribe the division of costs between railroad and public.
Iowa (275G, 1,078F, 171S)	90% 10% other	0%	See Remarks		Projects installed after July 1, 1973, state can pay up to 50% maintenance, but not to exceed $450 annually for each crossing.
Louisiana (101G, 686F, 18S) Department of Transportation and Development	100%	0%	0%	100%	—

Grade Crossing Warning System Cost Allocations

State or Public Body	Installation Costs State/Railroad		Maintenance Costs State/Railroad		Remarks
Kansas (221G, 810F, 121S) State Corporation Commission Department of Transportation	100%	0%	0%	100%	Some projects are financed by state funds administered by the State Corp. Commission and has the authority to assess a railroad a maximum of 50% and a minimum of 20% of the costs.
Kentucky (171G, 624F, 38S) Department of Transportation	100% (State highways) 90% (Off system roads)	0% 10%	See Remarks		Maintenance costs paid by the state on an average annual cost Class 1—Flashers with one track $650 Class 2—Flashers with multi-tracks $950 Class 3—Flashers and Gates with one track $980 Class 4—Flashers and Gates with multi-tracks $1250
Maine (58G, 327F, 39S) Public Utilities Commission	50% On state highways only. Town and country roads by negotiation with railroad.	50%	0%	100%	If installation qualifies as a federal project up to 90% will be paid for by federal funds.
Maryland (68G, 192F, 36S) State Road Commission	0%	100%	0%	100%	—
Massachusetts (164G, 442F, 43S) Three Man Commission	50%	50%	0%	100%	—
Michigan (544G, 1,885F, 89S) Public Service Commission	50%	50%	See Remarks		On projects negotiated after 1931 on a 50/50% basis, the state pays $10 per month for maintenance for flashers or flashers and gates.
	100%	0%	0%	100%	Federal funded
Minnesota (128G, 921F, 20S) Department of Transportation	100% State 70-90% Railroad 0-10% Local Gov't 10-25%	0%	0% 0%	100% 100%	On system Off system
Mississippi (21G, 345F, 19S)	100%	0%	0%	100%	The local governing body contributes 10% to the state. Should the local governing body refuse, the railroad may at its option do so.
Missouri (170G, 946F, 178S) Public Service Commission Highway Commission	100%	0%	0%	100%	Some projects are financed with state funds. The Commission has authority to assess the cost to city, county or railroad. Experience of railroads has been their portion has varied from 10% to 50%.
Montana (60G, 205F, 10S) Department of Highways	100%	0%	0%	100%	—

upon the number of crossings within a State's borders. This change will make the Federal safety program more effective by directing Federal dollars where the crossings—and the safety needs—are. Iowa will receive an additional $2.5 million which will result in greater protection for our citizens."

Federal funds mentioned above are for installation of automatic warning systems. Federal funds are not available for maintenance of these warning systems, but 16 states do provide some maintenance funds. California, Florida and North Carolina pay 50% of the maintenance costs, while Washington pays 25%. Other states pay various amounts, and many negotiate specific agreements with the railroads concerning maintenance funding for automatic warning devices.

The tables show the types of automatic warning devices in service in each state as of August 1976. Also, shown in the tables is the division of funds provided for installation and maintenance.

On the installation side, public agencies (state, federal or local) provide fundings. Maryland requires railroads to pay for the installation costs, and in 21 states both public and railroad funds are used for installation purposes.

On the maintenance side, railroads pay the cost in 32 states, while 16 states provide some maintenance funds.

The basic cost divisions were furnished by the Communication & Signal Section, AAR. The amount and type of protection in service came from Federal Railroad Administration sources.

Grade Crossing Warning System Cost Allocations

State or Public Body	Installation Costs State/Railroad		Maintenance Costs State/Railroad		Remarks
Nebraska (185G, 513F, 65S)	90%	10% (Federal funded) 80% state, 10% railroad 10% other (State funded)	0%	100%	On state funded projects, 10% is paid by other governmental units such as county or city.
Nevada (21G, 64F, 5S)					
New Hampshire (25G, 154F, 16S) Department of Public Works	90% Federal, 10% state	0%	0%	100%	Federal funded. B&M is negotiating with state to pay part or all of the maintenance.
New Jersey (356G, 637F, 32S) Public Utility Commission	95%	5%	0%	100%	—
New Mexico (51G, 116F, 12S)	100%	0%	0%	100%	—
New York (674G, 1,299F, 104S) Public Service Commission	90%	10%	0%	100%	—
North Carolina (156F, 807F, 10S)	100%	0%	50%	50%	—
North Dakota (58G, 218F, 2S)	90%	10%	0%	100%	—
Ohio (682G, 2,305F, 97S) State Highway Department	100%	0%	0%	100%	—
Oklahoma (81G, 694F, 59S)	100%	0%	0%	100%	—
Oregon (208G, 194F, 86S)	80%	20%	0%	100%	—
Pennsylvania (498G, 1,385F, 112S)	By Order		0%	100%	—
Public Utility Commission	100%	0%	0%	100%	Federal Funds
Department of Transportation					
Rhode Island (6G, 25F, 19S) Public Utility Commission	100%	0%	0%	100%	—
South Carolina (118G, 323F, 5S)	100%	0%	0%	100%	—
South Dakota (1G, 191F, 5S)	100%	0%	0%	100%	—

Power for crossing protection? No contest.

Protection of the public at railroad highway crossings demands a reliable source of power. Incomparable McGraw-Edison nickel-cadmium batteries should be your first choice for a number of reasons.

Batteries that live to a ripe old age return your investment time and time again. When installed and maintained according to instructions, our nickel-cadmium batteries also reduce maintenance, labor and servicing time. Depending on application, and with proper maintenance, a McGraw-Edison nickel-cadmium storage battery can last up to 40 years or more. And nickel-cadmium batteries are not subject to bursting from sub-zero temperatures, regardless of state of charge.

Hot weather performance is also exceptional. Nickel-cadmium batteries can be exposed to a temperature of 115F without loss of expected service life.

Even if our no-contest batteries stand idle for long periods, they show remarkably little discharge. They can be stored indefinitely without permanent damage.

Low Maintenance, too!

With proper float charge regulation, service time and water consumption can be drastically reduced.

Occasional short circuiting or reversing will not harm the battery or result in any permanent loss of capacity.

Compare!

Nickel-cadmium batteries are long lasting, require little maintenance and perform well under adverse temperature conditions.

Master Chargers.

The best batteries deserve the best chargers. McGraw-Edison chargers—available in nine models with outputs from 1.5 to 40 amps—literally sense the condition of the battery and load, and adjust output *automatically.* Properly adjusted chargers can prevent overcharge on both your battery and electric bill.

Newest addition to our charger line is the remarkably easy-to-install, easy-to-adjust Model BC 12-6A (pictured), for use on nominal 12 volt systems requiring 6 amp outputs.

Edison batteries and chargers are now products of McGraw-Edison Company, Power Systems Division, P.O. Box 28, Bloomfield, NJ 07003.

McGRAW-EDISON

The no-contest stand-by system.

Grade Crossing Warning System Cost Allocations

State or Public Body	Installation Costs State/Railroad		Maintenance Costs State/Railroad		Remarks
Tennessee(104G, 486G, 17S)	100%	0%	0%	100%	Public Chapter No. 646, Senate Bill 1792, states that within six months after occurrence of a fatality, the railroad can be ordered to install automatic signals. The cost borne equally by railroad, state and local government.
Texas (519G, 2,755F, 150S) Department of Highways and Public Transportation	90%	10%	See Remarks		State makes a token contribution for maintenance as follows: $100 annually for one track, $150 annually for multi-track.
Utah (30G, 232F, 14S)					
Vermont (12G, 143F, 7S) Public Service Board	Set by Board by Negotiation		0%	100%	If installation qualifies as a Federal project up to 90% will be paid for by federal funds.
Virginia (218G, 456F, 47S) Department of Highways & Transportation	100%	0%	See Remarks		State contribution for maintenance is as follows: Flashers with 1 track $337.50 Flashers with multi-tracks $430.00 Flashers and gates with one track $507.50 Flashers and gates with multi-tracks $615.00
Washington (94G, 547F, 60S) Highway Department	90% (Railroad frequently required to pay local share)	10%	25%	75%	Projects involving federal funds. Maintenance based on AAR unit counts.
West Virginia (51G, 292F, 20S) Department of Highways	0%	100%	0%	100%	—
Wisconsin (226G, 1,206F, 455S) Public Service Commission	Up to 85%	15%	Up to 85%	15%	Projects are negotiated with Public Service Commission
Highway Department	90%	10%	0%	100%	
Wyoming (16G, 100F, 8S) Public Service Commission	50%	50%	$10 per month	balance	Additional costs to install gates is paid by railroad.
Highway Department	90%	10%	0%	100%	
Washington, DC (3F) Department of Transportation	100%	0%	0%	100%	Federal funded.

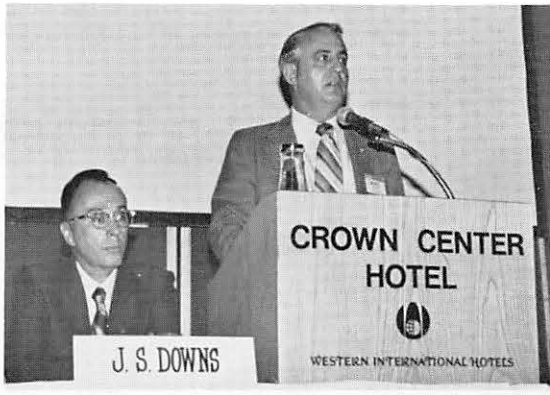
SOURCE: Communication & Signal Section, AAR, and Federal Railroad Administration
KEY: State name (G= gates, F= flashing lights, S= highway signals, wigwags, bells).

Signalmen attend C&S meet

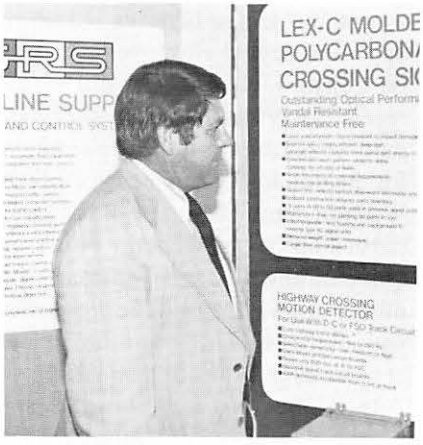
BofRS officers attending the Communication & Signal Section, AAR meeting in Kansas City, MO in September included (from the left): R. T. Bates, president; J. W. Walsh, vice president; J. E. Hansen, director of research; W. B. Harwell, Jr., vice president; and W. W. Lauer, grand lodge representative.

John E. Hansen, BofRS director of research, visited the Wabco booth exhibiting track circuit equipment.

Witt B. Harwell, Jr., BofRS vice president, scanned literature at the Safetran Systems Corp. booth where signal equipment was on display.



Asked by C&S Section Chairman J. S. Downs (left), general superintendent communications & signals, Frisco, to say a few words, BofRS President Bates (at podium) said: "We're happy to be back. You may or may not have recognized that due to a number of circumstances, we weren't able to attend last year. As Jack pointed out, we had a few changes in our official family of the Brotherhood and I'm sure that everyone will miss Chuck Chamberlain, our president that has participated in a number of these meetings. However, the direction and purpose of our Brotherhood has not changed. We can assure you that we will continue to be here; we will make our voices heard when we agree and we'll make them heard when we disagree. Again, we thank you very much for recognizing the Brotherhood and we're happy to be back."



Walt Lauer, grand lodge representative, visited the General Railway Signal Co. booth to see the new plastic lens crossing signal unit.

BofRS Vice President Joe Walsh saw McGraw-Edison's solar panels on display.

Vice President Joseph W. Walsh (at podium) welcomed members to the Eastern Regional meeting at Anderson, IN on September 23, 1978. At the head table (from the left) are: Witt B. Harwell, Jr., vice president; W. D. "Dink" Best, secretary-treasurer; R. Thomas Bates, president; Walsh; Charles S. Chandler, vice president; and M. B. "Pete" Frye, vice president.

Signalmen meet in Indiana

President Bates (left) reported that the BofRS had signed an agreement with ConRail in which the national mediation agreement on wages and benefits would be applied to ConRail members.

With an audience of over 100, Brotherhood of Railroad Signalmen President R. Thomas Bates, reported on an agreement signed with Consolidated Rail Corp. in which the national mediation agreement on wages and fringe benefits would be applied to signal employees working on ConRail. He said that during the recent N&W strike, the Brotherhood paid strike benefits and premiums for health insurance of Norfolk & Western signalmen. The BofRS will participate in the general safety inquiry of the Federal Railroad Administration which will be concerned with signaling and communications at a January 1979 public hearing.

In discussing the Federal Employers' Liability Act, Patrick Zika of

Floyd F. Guy, vice general chairman, ConRail, was most helpful to members and the BofRS staff in registering members attending the meeting.

Patrick Zika, attorney with the firm of Erpelding & Zika, described the importance of seeking counsel when injured and the benefits to be obtained under the Federal Employers' Liability Act.

C. J. Chamberlain, (at podium) labor member, Railroad Retirement Board stressed the importance of labor-management cooperation to present a legislative package to Congress to get more money for the retirement fund. Joe Walsh, BofRS vice president (at right) chaired the meeting.

Merrill Phillips, Travelers Insurance Companies, outlined improved benefits and answered questions from those in attendance.

W. D. Best, secretary-treasurer, described a new computer system to be installed in Grand Lodge, and told of its benefits to the union.

the law firm of Erpelding & Zika, said that railroad workers receive more benefits and compensation under FELA than they would under state workmen's compensation laws. For example, under FELA an injured man can recover money for his pain and suffering. Also, many workmen's compensation laws provide specific amounts of money for certain injuries, whereas under FELA the money recovered is dependent upon the efforts of injured worker and the railroad company. An advantage of seeking FELA counsel is that he is able to investigate the accident, interview witnesses and obtain information about an accident as soon after the fact as he is alerted to it. This investigative work, many times, can be done while the injured man is still in the hospital, or off the job. Zika pointed out that one must file a claim within three years from the date of the accident.

C. J. Chamberlain, labor member, Railroad Retirement Board, reported that RRB's operation involves $5 billion payout per year. There are about 1.1 million beneficiaries, with some 500,000 employed on the railroads. Thus, on a current operating basis, there is a shortfall of funds being paid into Railroad Retirement compared to benefits paid out. Chamberlain said the current deficit is about $50 million per year because of restricted funding ordered by the Office of Management & Budget. He said that what is needed is a concerted effort by rail labor and management to come up with a legislative package to present to the U.S. Congress to fully fund the railroad retirement system.

Merrill Phillips, secretary, claim department, Travelers Insurance Companies, described the new benefits resulting from the national agreement signed by the railroads and the BofRS. A key benefit is the ability of a railroad man to retire at age 61 with 30 years of service and be covered until age 65 with major medical benefits.

W. D. Best, BofRS secretary-treasurer, described the new computer system to be installed at Grand Lodge. He said that computer-generated data would be of help to local financial secretaries. He described in detail the information to be obtained and kept in each member's file.

Donald Leiderman, manager of claims, Provident Life & Accident Insurance Co., described the benefits of the supplemental sickness plan. Also, he answered questions concerning the plan and its operation.

Donald Sundstrom, senior account executive, Aetna Life & Casualty Co., said the $50 family deductible amount had been raised to $100 under the new agreement. The maximum benefits payable in one year, excluding orthodontia work, has been increased from $500 to $750.

Donald Leiderman, claim manager, Provident Insurance, answered questions and described how to file claims for benefits.

Donald Sundstrom, senior account executive, Aetna, told of the experience of the dental plan for railroad employees, and told how to file claims.

William P. Bath, (left), recording & financial secretary, N&W local 169, talks about railroad retirement benefits with Jerry Robbins, manager at Indianapolis, IN for the Railroad Retirement Board.

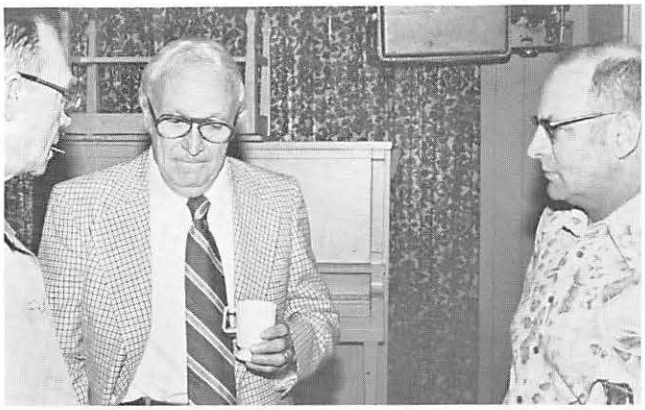
Three Burlington Northern men attended the Anderson regional meeting. Here are (from the left): C. R. Adkison, local chairman; Charles H. White, local president; and H. Ralph Neihart, recording & financial secretary. All are from Aurora-Galesburg Lodge 103.

Tom Bates, BofRS president (left) has the opportunity to chat with Bill Radziewicz, assistant general chairman, ConRail.

Pete Frye (left) BofRS vice president talks with Herbert K. Jackson, general chairman, Monon.

TSJ camera caught (from the left) Virgil M. Speakman, Jr., local chairman, Dayton Lodge 52 ConRail; Timothy M. McClure, local chairman, Winton Lodge 94, B&O; and John R. McDonald, general chairman, Baltimore & Ohio.

Three members of Dayton Lodge 52 ConRail use a coffee break to chat. From the left are: Roy T. Tarvin, local chairman; William E. Tarvin, financial secretary; and R. E. Welsh, local chairman.



Robert M. Dennis (left) of N&W Lodge 169 makes a point to V. Joseph Sartini (center) N&W general chairman, while Paul W. Springer, Lodge 169 local president listens.

ConRail men get together during a break. From left are: John M. Casey, local chairman, Lodge 212; Ernest A. Clemons, Lodge 212; Bernard E. Britcher, general chairman; and Joseph W. Walsh, BofRS vice president.

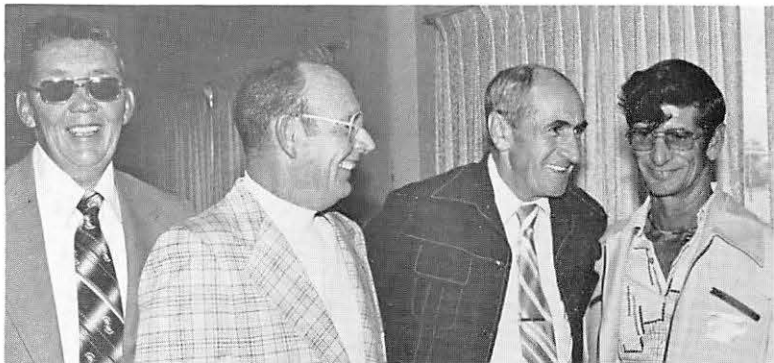
Howard H. Hock (left) local chairman, Nickel Plate Lodge 166 takes a break with C. E. "Pete" Collins of Wabash Lodge 55, both of Norfolk & Western.

John W. Hogan (left) general chairman, Long Island, talks with John C. Bean, local chairman, Rochester Lodge 93, ConRail.

Pete Frye (left) BofRS vice president talks with Marvin O. Darling, local president of ConRail Lodge 38 of the Columbus, Ohio signal shop.

Joe Walsh, BofRS vice president, talks with Indiana Harbor Belt Noble Lodge 3 James H. Walker (center), local chairman; and Walter S. Carlson (right) local president.

Donald J. Hammond (left) financial secretary, B&O Winton Lodge 94, chats with Dink Best, BofRS secretary-treasurer, and Carson B. Scott (right), local chairman Lodge 94.



Chesapeake & Ohio men get together on a break. From the left, are: William O. Clements and Herbert M. Becker of Gateway Lodge 135; Russell G. Hagley, local chairman of Hocking Lodge 211; and Richard H. Bush, Lodge 135.

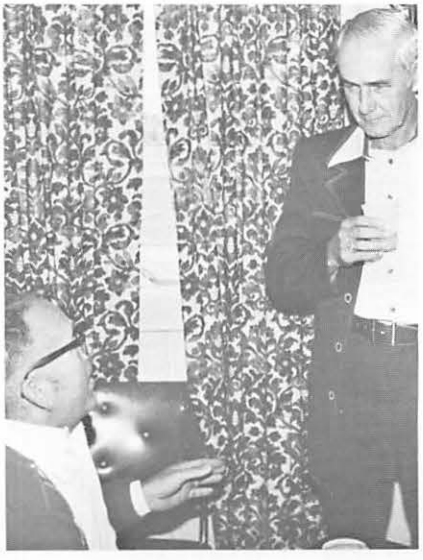
Witt B. Harwell, Jr. (left) BofRS vice president points to a key section in an insurance form to Michael E. Ebert, Anderson Lodge 45, ConRail.

W. D. "Dink" Best, BofRS secretary-treasurer, discusses a matter with James P. Sparkman (right), local chairman, Indianapolis Lodge 42, ConRail.

Jerald E. Caris (left), Primary Lodge 64, EL-ConRail, listens to Tom Bates, BofRS president during a coffee break.

Chuck Chandler, BofRS vice president, takes a break with C. R. "Sunny" Adkison (right), local chairman, Aurora-Galesburg Lodge 103, BN.

Erie-Lackawanna Primary Lodge 64 Local President Robert L. Reish (left) takes a break with Jesse R. Downs, local chairman & vice general chairman.

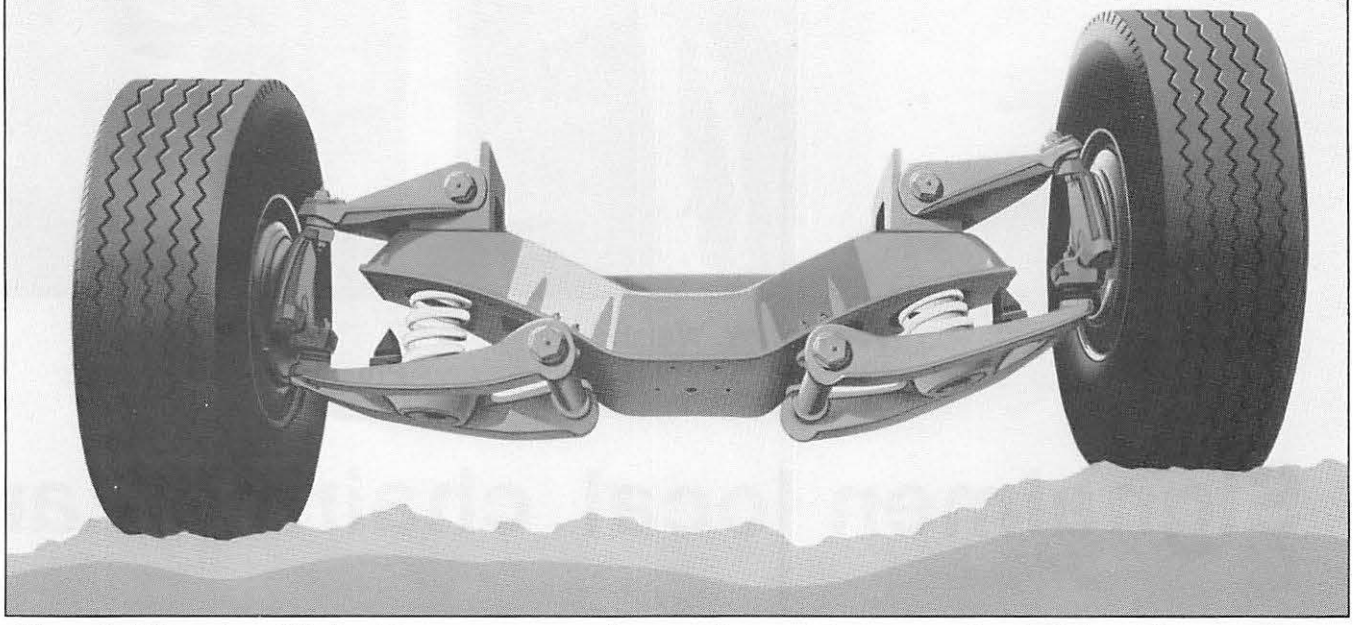


Winton Lodge 94 men talk at coffee break as Nelson J. Earnhart (left) makes a point with W. L. Woolf. Both work for the Baltimore & Ohio.

C&O Gateway Lodge 135 members gather. Herbert M. Becker (left) makes a point to Richard H. Bush (center) and Harvey H. Parker, general chairman.

Witt B. Harwell (left) vice president talks with Paul E. Stevens, local chairman Wabash Lodge 55 and vice general chairman, Norfolk & Western.

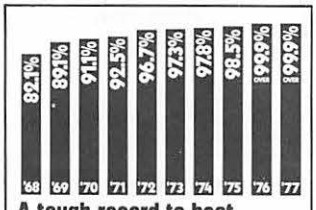
One massive reason to buy a tough Chevy pickup.



Chevy's Massive Girder Beam suspension system. Every 2-wheel-drive Chevy pickup is built with a Massive Girder Beam front suspension. It's tough—to handle rough roads. And flexible—to provide a smooth, stable ride.

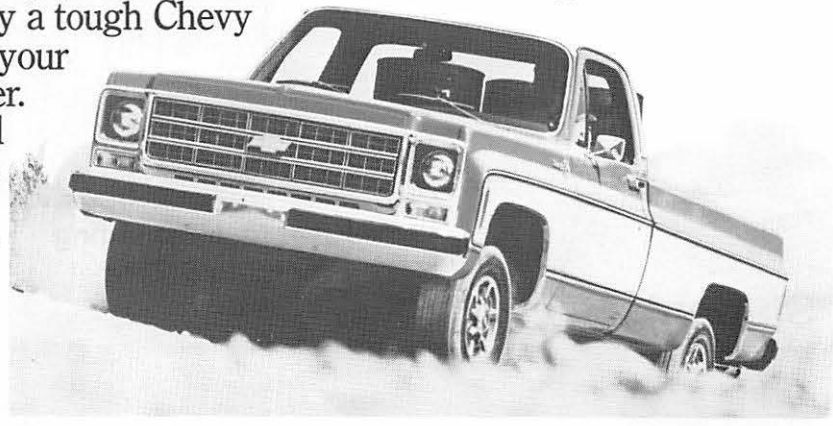
It works like this: Attached at each end of the front suspension are two steel arms that flex independently up and down, allowing wheels to individually step over rough spots. Sturdy steel coil springs help prevent road shock from reaching the frame.

For more good reasons to buy a tough Chevy pickup, see your Chevy dealer. And if you'd rather lease a Chevy truck, many Chevrolet dealers can help.



A tough record to beat.

95.3% of all Chevy trucks, in the ten most recent years recorded, were still on the job. This is based on R. L. Polk & Co. model year registration statistics through July 1, 1977. 1978 statistics not available.



CHEVY TRUCKS

BUILT TO STAY TOUGH.

Teachers

Joseph W. Walsh
Vice President

R. Thomas Bates
President

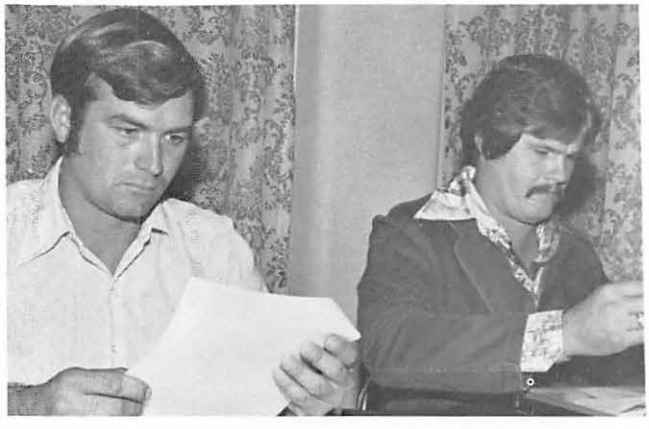
Signalmen local chairmen and

FELA Counsel

Edward J. Erpelding
Erpelding & Zika

Irving Schwartzman
Savage, Jones, Tingle & Schwartzman

Students



William E. Tarvin (left) is financial secretary of Dayton Lodge 52 Conrail, and Virgil M. Speakman, Jr., is local chairman.

R. E. Welsh (left) is local chairman of Dayton Lodge 52, ConRail, and Jesse R. Downs is local chairman Primary Lodge 64, Erie Lackawanna, ConRail.

W. D. Best
Secretary-Treasurer

Witt B. Harwell, Jr.
Vice President

Melvin B. Frye
Vice President

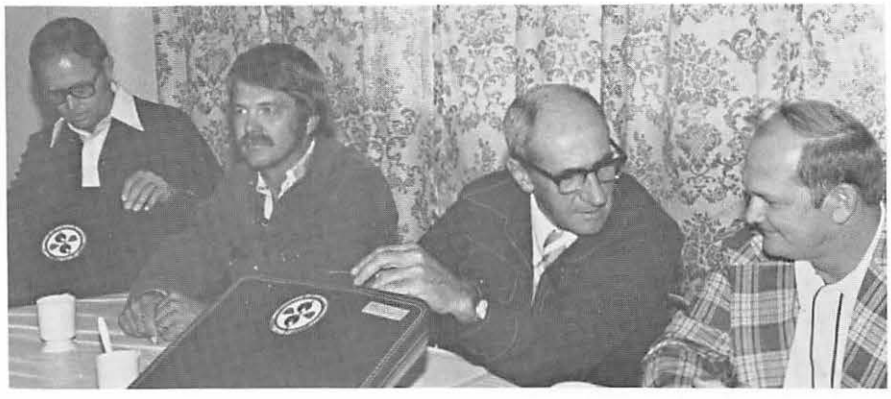
local secretaries go to school

BofRS Vice President Joseph W. Walsh welcomed local lodge officers and local chairmen to the Friday school session designed to help them in their work. In addition to pointing out the important duties of local lodge officers, Walsh stressed the importance of being able to write and speak well. He gave them copies of two papers dealing with writing and public speaking.

President Tom Bates reported that an agreement had been reached with ConRail by which the national mediation agreement on wages and fringe benefits would be applied to signal employees on that railroad. He said that the BofRS was paying strike benefits to our members on the N&W as well as paying health insurance premiums for those who were not working.

Edward J. Erpelding, FELA attorney, said that a few questions should be considered when someone is injured on the job. They are: Is anyone at fault? Are good equipment and tools available? Does the man have a safe place to work? The injured party must prove that the railroad is at fault. Faults can include: (1) unsafe place to work; (2) inadequate or deficient tools; (3) insufficient help, either in equipment or men.

From the left are: Jim Ferres, local chairman, Lodge 38; Owen L. Harbour, local chairman, Jesse Clark Lodge 41; and Harold R. Bierbaum, recording secretary, Lodge 41. All are from ConRail Lodges.



From the left are: Robert C. Buck, vice general chairman, Grand Trunk Western; Bruce A. Hazard, local chairman, Durand Lodge 14 GTW; Russell G. Hagley, local chairman, Hocking Lodge 216, Chesapeake & Ohio; and Harvey H. Parker, general chairman, C&O-IHB-GTW-AA.

Students

Three ConRail students (from the left) are: Eldon R. Moyer, local chairman, Toledo Lodge 10; Larry Pawlowski, recording & financial secretary, Lodge 10; and Mark B. Parkinson, recording & financial secretary, Anderson Lodge 45.

From the left: C. S. Chandler (rear), BofRS vice president; Michael C. Ackerman (foreground), recording & financial secretary, Indianapolis Lodge 42, ConRail; John W. Hogan (rear) general chairman, Long Island; and Charles R. Wade, local president, CR Lodge 42.

ConRail signalmen (left to right) are: Richard J. Szprygada, assistant general chairman; Samuel F. Slade, III, vice general chairman; Donald Murphy, system secretary-treasurer; and John C. Bean, local chairman, Rochester Lodge 93.

William E. Tarvin (left) financial secretary, Dayton Lodge 52, ConRail, uses a coffee break to talk with Michael C. Ackerman, recording & financial secretary, Indianapolis Lodge 42, CR.

Floyd F. Guy, vice general chairman, ConRail, chats with John E. Hansen (right) BofRS director of research.

ConRail local chairmen from Dayton Lodge 52 are Virgil M. Speakman Jr., (left) and Roy T. Tarvin.

Thomas L. Loeffler, local chairman, Victory Lodge 73 ConRail has an opportunity to talk with James A. Kistler, local chairman, Anderson Lodge 45.

As for contributory negligence by the employee, the FELA law, Section 3, says in part, "the fact that the employee may have been guilty of contributory negligence shall not bar a recovery, but the damages shall be diminished by the jury in proportion to the amount of negligence attributable to such employee."

Secretary-Treasurer W. D. Best commended the financial secretaries on their fine work. He briefly described the new computer system that will be installed in Grand Lodge Headquarters. He said the computer will be able to generate information that will help the financial secretaries and make their jobs easier. One point to remember, he said, is that for the computer to be helpful, it must be supplied with good information. One job for the computer will be to keep correct, current addresses for members. This is important for making mailings to members and for sending The Signalman's Journal to them. Best said that while paying strike benefits to some 400 Norfolk & Western signal employees, he had to correct about 125 addresses. He stressed the importance of letting Headquarters know when you move or change your address.

Vice President Witt Harwell gave a little pep talk in which he said "Work safely! Do your job! Give 8 hours work for 8 hours pay!"

Vice President Pete Frye gave the "students" copies of a training manual for local chairmen in claim and grievance handling. Frye briefly described the Railway Labor Act and how it affects signalmen. In addition to answering questions from the floor, Frye gave a selected bibliography to students enabling them to obtain books for further reading on the subjects discussed. One book, titled "The Railway Labor Act at 50" is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The book is by the National Mediation Board, Stock Number 037-000-0021-3 and the price is $4.50.

Irving Schwartzman, an FELA attorney, said that railroading is one of the most hazardous of occupations. He stressed the fact that the statute of limitations for filing injury suits under the Federal Employers' Liability Act is three years. He counseled about being careful in filling out an accident report, especially in detailing injuries, because some injuries may not appear until some time after the accident. He said this may happen when an employee strains his back. If in any doubt, seek FELA counsel, they are listed periodically in The Signalman's Journal. An injured man is advised not to sign any paper when under medication. The time to consider signing papers or filling out forms is after consultation with an FELA attorney and when any pain or suffering has gone. It's been said that the hospital bed is not the place to sign away one's rights.

Richard A. Mancuso (left) local chairman, ConRail Lodge 68, makes a point with Norman G. Mapes, local chairman, Elkhart Lodge 83, ConRail.

Russell G. Hagley, (left) local chairman, Hocking Lodge 216, Chesapeake & Ohio, talks to R. Tom McGill, investigator for Erpelding & Zika law firm.

Bernard E. Britcher (left) ConRail general chairman chats with John M. Casey, local chairman of CR Lodge 212.

Jesse R. Downs (left) local chairman Primary Lodge 64, Erie Lackawanna, ConRail, enjoys a joke with Joseph W. Walsh, BofRS vice president.

V. Joseph Sartini (left), general chairman, Norfolk & Western, talks with Jack J. Dawson, local chairman, Wabash Lodge 55, N&W.

Signal RS&I

We are highly pleased that recent articles in The Signalman's Journal about the Federal Railroad Administration's Rules, Standards and Instructions for signal systems have generated much discussion and many comments. Apparently, there are a number of our members who think that periodic testing, signal equipment tolerances, etc., are just some arbitrary rules established on their own particular railroad. They are amazed that the regulations are actually federal regulations for all railroads operating in the United States.

Depending on the particular railroad these tests are called by various names. In some cases they are referred to as the RS&I, which is the abbreviation for Rules, Standards & Instructions. In other cases, they are referred to as ICC tests, which is a carryover from the time when signal systems were under the jurisdiction and authority of the Interstate Commerce Commission. On still others, they are merely referred to as signal system tests, with possibly a number fixed thereto, to identify a particular test in accordance with the company rules.

In any event we wish to emphasize the fact that they are not railroad rules per se, but are United States government regulations, prescribed under the provisions of the Signal Inspection Act, and enforceable by the Federal Railroad Administration.

Last month in this Signal RS&I column we wrote about signal RS&I section 236.109 which sets forth the tests, and record keeping requirements which must be made periodically on signal systems and components. Due to the great interest on the subject we believe it is worthwhile to discuss it further and to re-emphasize some important points.

With particular emphasis on that part of 236.109 which requires that the record of tests must be signed by the employee making the test, we are told of numerous instances when this is not being done. In some cases, the leader or foreman has been signing the test record. In one instance, the signal supervisor was preparing and signing the test forms. Again we wish to point out that the employee who actually makes the test must affix his signature thereto, confirming that the conditions of the device, any adjustments that were made, etc. as set forth on the record, are correct. As for the signal supervisor signing the record for tests made by others, this is a violation of the regulations. The railroad company could be fined up to as much as $2,500 if someone other than the employee making the test signs the form. So you can see how important it is to sign the test forms if you make the tests.

Section 236.109, states, in part: "Such forms shall show name of railroad, place and date, equipment tested, repairs, replacements, adjustments made, and condition in which apparatus was left, and signature of employee making the test."

The best qualified person to know the actual conditions of the equipment tested surely should be the person who made the test. This regulation also requires that any adjustments made, as well as the condition of the equipment must also be recorded on the test form. Therefore, if adjustments, repairs or replacements are made, such information must be put on the form. Thus it is not enough to merely write, OK, that the tests were made, but actual results of the tests must be indicated, as well as the condition in which the device was left.

If the tests forms must meet federal regulations, why aren't the test forms actually issued by the Federal Railroad Administration? This is a good question and it is one that we get many times. We certainly believe there is merit to have the signal tests reported on FRA authorized forms, rather than on individual railroad forms. At the present time, false proceed signal indications (49CFR233) and certain locomotive inspection reports, (49CFR230) are recorded on federal forms. For example, initial terminal road train brake tests under Section 232.12 are reported on Form FRA F-6180-48. In these instances, FRA furnishes specimen forms to the railroads, which are then reproduced and used for record keeping purposes.

In summary, the Signal RS&I are federal regulations and compliance is enforced by the Federal Railroad Administration. The reason for these regulations is stated in an introduction to the Signal Inspection Act. The purpose of the Act is "to require certain common carriers by railroad to install and maintain certain appliances, methods and systems intended to promote the safety of employees and travelers on railroads."

'Tis the season to look for the union label.

If union families don't, who will?

International Ladies' Garment Workers' Union, 22 W. 38th Street, New York, New York 10018

From the Secretary-Treasurer

W. D. Best tells how students can obtain annuities

Children of deceased railroad employees may receive survivor annuities under the Railroad Retirement Act until age 22 if they are attending school on a full-time basis. Railroaders are thus assured that their children can receive some financial assistance to continue their education in the event of the employee's death.

The following questions are among those most frequently asked the U.S. Railroad Retirement Board about these student benefits.

(1) How much do students' annuities generally amount to?

Currently, the average monthly benefit paid to students by the Board is about $298.

(2) What is required for the student to be eligible?

He or she must be between 18 and 22 years old, unmarried, and attending school on a **full-time basis.** The deceased parent must have been insured for survivor benefits under the Railroad Retirement Act, which requires at least 10 years of railroad service and a "current connection" with the railroad industry. The current connection requirement is generally met if the parent was working in the railroad industry up to or shortly before death or retirement. If the parent did not meet these requirements, any survivor benefits due would be payable by Social Security Administration instead of the Board.

Dependent grandchildren of insured employees may also qualify for annuities, if their parents are deceased or disabled.

(3) What is required for a child to qualify as a full-time student?

A student attending day or evening classes meets this requirement if the course of study lasts at least 13 weeks, and if the school considers the student a full-time student according to their standards. In addition, if he or she attends a high school, vocational school, or any educational institution other than a junior college, college or university, the student's rate of attendance must be at least 20 hours a week.

(4) Are there any restrictions on the type of school a student may attend in order to qualify for an annuity?

Yes. He or she must attend a public school that is supported by the local, State, or Federal government; a private school that is approved by the State or is accredited by a recognized accrediting agency; or a non-accredited school from which credits are accepted on transfer by at least three accredited schools. Attendance at foreign secondary schools and many foreign colleges and universities is also acceptable.

(5) Will enrollment in correspondence courses qualify a child as a full-time student?

Generally not. Only under certain special circumstances which prevent actual classroom presence can correspondence courses be considered to establish full-time attendance. Anyone considering correspondence courses should check with the nearest Board office for details concerning his specific case.

(6) If a child is taking some job-related courses at a college at the request of his employer, can he receive an annuity if he is receiving his salary while at school?

No. The fact that his **employer pays him while he is attending school** disqualifies him for an annuity. However, a student participating in a work-study program (in which he works at a job assigned to or obtained for him by the school as an integral part of his instruction) is considered to be in full-time atten-

For United States residents only:

Allow 6 weeks for change to take effect. Form ML-1 Rev. 6/67

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Please send your new address to:
Brotherhood of Railroad Signalmen,
601 W. Golf Rd., Mt. Prospect, IL 60056

Name _____

Street or Box No. _____ **Apt. No.** _____

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Lodge No. _____ **Certificate No.** _____

Signal Training Bulletin

COMMITTEE G: Education & Training
Communication & Signal Section, AAR

B-4 Secondary Battery Nickel-Iron-Alkaline Storage-Type

Approved October 1973

Definition: (a) Secondary Battery: A combination of two metals or metalloids immersed in an electrolyte which in itself will not produce electrical energy without first having the metallic portion of the element decomposed by the passage of electric current.

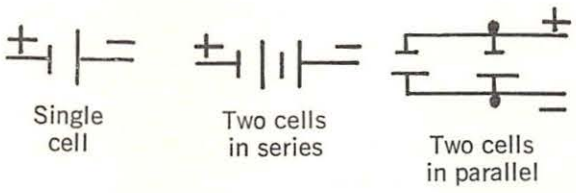
(b) Storage Cell: A secondary cell for storing electrical energy at one time for use at another time.

(c) Charging: The process of putting energy into a battery.

(d) Discharging: The process of taking energy out of a battery.

(e) Electrolyte: The fluid surrounding the elements of the battery.

Symbol:



Description: The nickel iron battery consists of three essential components: positive active material which is nickel oxyhydrate, negative active material which is metallic iron sponge and the electrolyte which is potassium hydroxide and water with lithium hydroxide added.

The positive material is encased in perforated nickel plated steel tubes. The negative material is encased in flat, perforated nickel plated steel pockets. The plate is formed by grouping the desired number of tubes or pockets and crimping or welding them to a nickel plated sheet steel frame. The cell container is of nickel-plated sheet steel insulated from the elements by hard rubber or plastic. See Figure 1.

Note: The last U.S. manufacturer of the nickel-iron battery will discontinue production of this battery early in 1975. Although this line of batteries will be discontinued, some railroads will continue to put nickel-iron batteries in service until existing stocks are exhausted. The manufacturer advises that parts and electrolytes will be available for at least 5 years.

Purpose and Application: The nickel-iron storage battery is used as a dc power source at locations where an ac charging source is available. It can be used for track circuits, signals, highway crossing protection or for any railway signal appliance or circuit that requires direct current.

General Information: The nickel-iron battery is especially adaptable under conditions of dirt and corrosion and where rough handling may be encountered. The rugged construction of the cells contributes substantially to their long life, thus shedding of active materials from the plates is virtually impossible.

One important advantage of the nickel-iron battery is that it can be stored almost indefinitely without attention.

The cell containers are metal and must be insulated from adjacent ones and other conductive materials.

The nominal voltage of a nickel-iron cell under load is 1.20 volts. The actual voltage depends on whether the cell is on open-circuit, charge or discharge. Open-circuit voltage may vary from 1.25 to 1.35 volts. When the cell is connected to an external load, its voltage will fall to a value dependent on discharge rate and state of charge. If the rate is held constant, the voltage decreases until it reaches a point where the cell is considered normally discharged. This is termed "final voltage", and it varies with the rate of discharge. A commonly used final voltage is 1.14 volts per cell.

Some general rules for storage battery installation and maintenance:

(a) Check polarity and connections when installing.

(b) Maintain proper charge.

(c) Maintain proper electrolyte by adding water but do not overfill.

(d) Keep battery dry and clean.

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(e) Avoid flames or sparks around battery since discharged gases might explode.

(f) Keep vent plugs in place and tight.

(g) Check terminal nuts at regular intervals and tighten if necessary.

(h) Keep terminals coated with grease as specified by railroad maintenance instructions.

(i) The electrolyte is alkaline and is injurious to skin and clothing. If contact occurs, wash immediately with water.

Detailed Operation: The nickel-iron battery has a nickel oxyhydrate positive plate, iron sponge negative plate and potassium hydroxide electrolyte. When the battery is discharged, the positive plate is reduced to a lower oxide and the iron negative plate is oxidized. The reaction is mainly an oxygen iron transfer between plates. The specific gravity of a new cell is 1.160 to 1.190 at 25C (77F) and at normal solution level. As no constituents of the electrolyte combine with the active material of the plates, the specific gravity does not change appreciably during charge or discharge, and therefore it does not indicate the state of charge or discharge.

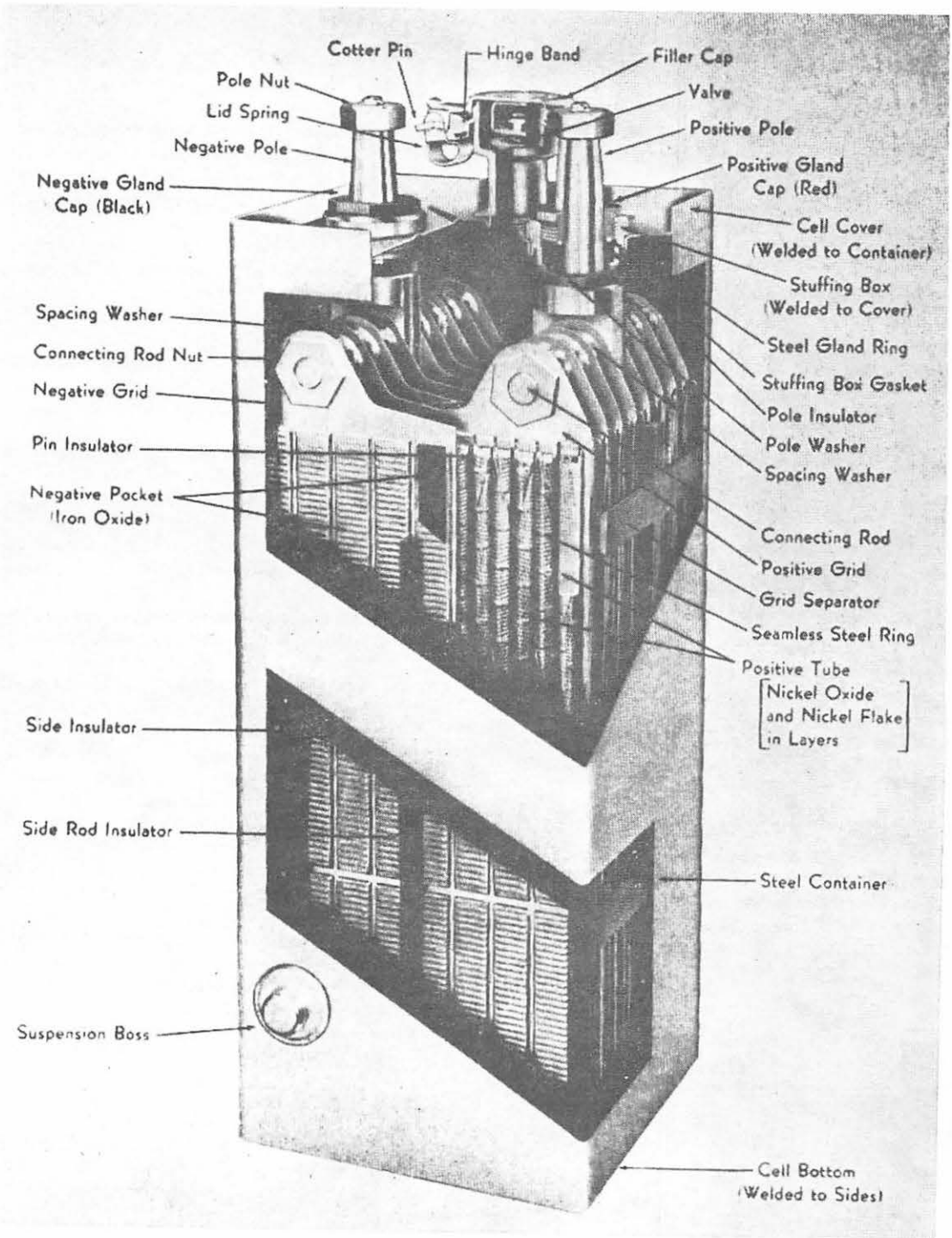


Figure 1 is a Nickel-Iron-Alkaline Storage Cell

Signal Training Bulletin

COMMITTEE G: Education & Training
Communication & Signal Section, AAR

Approved October 1973

B-5 Secondary Battery Nickel-Cadmium-Alkaline Storage-Type

Definition: (a) Secondary Battery: A combination of two metals or metalloids immersed in an electrolyte which in itself will not produce electrical energy without first having the metallic portion of the element decomposed by passage of electric current.

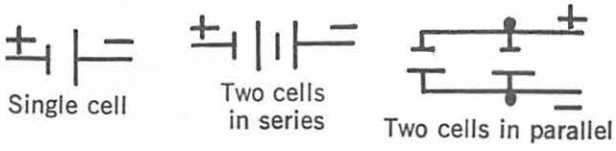
(b) Storage Cell: A secondary cell for storing electrical energy at one time for use at another time.

(c) Charging: The process of putting energy into a battery.

(d) Discharging: The process of taking energy out of a battery.

(e) Electrolyte: The fluid surrounding the elements of the battery.

Symbol:



Description: The plates of the nickel-cadmium battery are of the pocket type. The active material is contained in steel pockets made from finely perforated nickel plated strips formed into channels. A perforated steel cover strip is crimped into place to form a permanent envelope for the active materials. The pockets are interlocked, cut to length and placed in a steel plate frame for extra strength. The plate groups are insulated and inserted in either steel or high impact resistant plastic containers. The electrolyte is a solution of potassium hydroxide in water. See Figures 1 and 2.

Purpose and Application: The nickel-cadmium storage battery is used as a dc power source at locations where an ac charging source is available. It can be used for track circuits, signals, highway crossing protection or any railway signal appliance or circuit that requires direct current.

General Information: Nickel-cadmium battery is especially adaptable where rough handling may be encountered.

One important advantage of the nickel-cadmium battery is that it can be stored almost indefinitely without attention. The rugged construction of the cells contribute substantially to their long life. Thus shedding of active materials from the plates is virtually impossible.

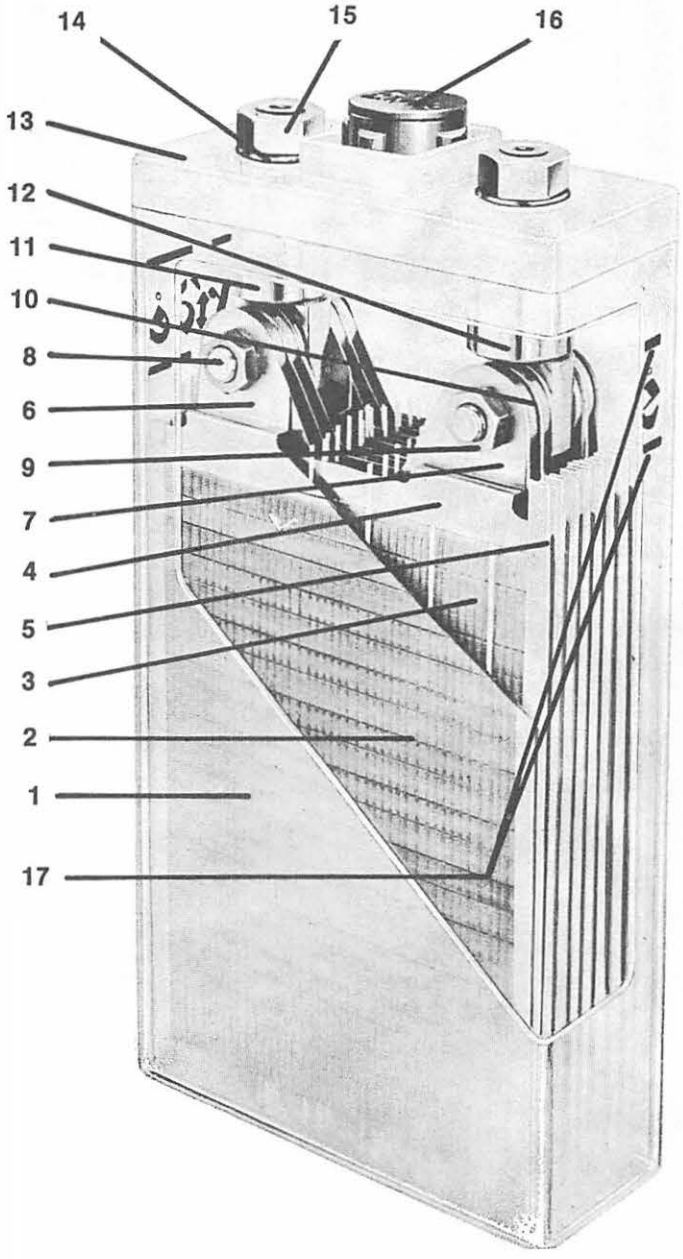


Figure 1 components are: (1) Polystyrene container; (2) Positive pocket (Nickel hydrate); (3) Negative pocket (Cadmium sponge); (4) "Hairpin" type plastic plate insulator; (5) Plastic edge insulator; (6) Positive plate; (7) Negative plate; (8) Steel connecting rod; (9) Steel connecting nut; (10) Steel spacing washer; (11) Positive terminal pole; (12) Negative terminal pole; (13) Plastic cell cover (bonded to container); (14) Terminal pole packing washer; (15) Seal nut; (16) Vent cap; (17) Electrolyte minimum and maximum level indicators.

Chemical action in a Nickel-Cadmium storage battery.

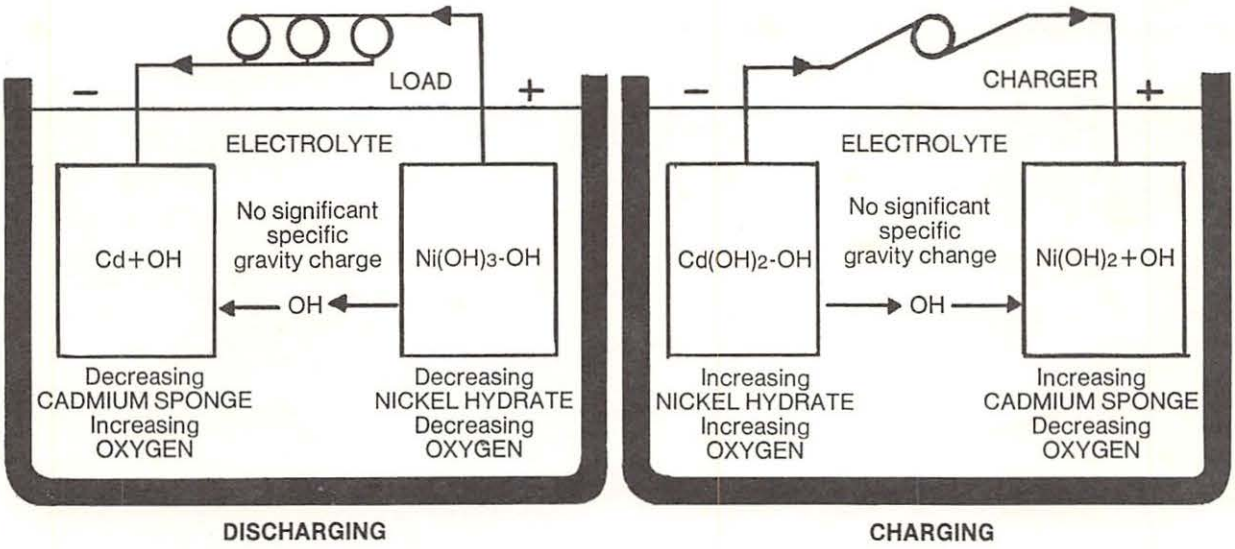


Figure 2

The nominal voltage of a nickel-cadmium cell under load is 1.20 volts. The actual voltage depends on whether the cell is on open circuit, charge or discharge. Open circuit voltage may vary from 1.30 to 1.38 volts. When the cell is connected to an external load, its voltage will fall to a value dependent on discharge rate and state of charge. If the rate is held constant, the voltage decreases until it reaches a point where the cell is considered normally discharged. This is termed "final voltage," and it varies with the rate of discharge. A commonly used final voltage is 1.14 volts per cell.

Some general rules for storage battery installation and maintenance:

(a) Check polarity and connections when installing.

(b) Maintain proper charge.

(c) Maintain proper electrolyte level by adding water but do not overfill.

(d) Keep battery dry and clean.

(e) Avoid flames or sparks around battery since discharged gases might explode.

(f) Keep vent plugs in place and tight.

(g) Check terminal nuts at regular intervals and tighten if necessary.

(h) Keep terminals coated with grease as specified by railroad maintenance instructions.

(i) The electrolyte is alkaline and is injurious to skin and clothing. If contact occurs, wash immediately with water.

(j) It is recommended that all exposed metal surfaces be occasionally wiped with an oily rag or given a light film of oil with a brush to prevent oxidation.

Detailed Operation: The nickel-cadmium battery has a nickel hydrate positive plate, cadmium sponge negative plate and potassium hydroxide electrolyte. When the battery is discharged the positive plate is reduced to a lower oxide and the cadmium negative plate is oxidized. The reaction is mainly an oxygen iron transfer between plates, as in the nickel-iron cell. The specific gravity of a new cell, is 1.160 to 1.190 at 25C (77F) and at the normal solution level. As no constituents of the electrolyte combine with the active material of the plates, the specific gravity does not change appreciably during charge or discharge, and therefore it does not indicate the state of charge or discharge.

Notes:

dance. Students who work part-time while attending school may also be considered full-time students.

(7) Will a student receive benefits for the months that he or she is not in school?

A student can continue to receive benefits during periods of four months or less (such as summer vacation) if he or she was attending school full-time before the period began and intends to return to school full-time within four months.

(8) Can a student's earnings affect the amount of benefits?

The rules on earnings for students are the same as for other survivor annuitants. A student may earn up to $3,240 in 1978 without losing any benefits. If he or she earns more, the annuity will be reduced at the rate of $1 for every $2 earned over $3,240. For the first year benefits are payable, a student can receive benefits for any month in which he or she doesn't work or in which earnings are less than $1/12$ of the annual exempt amount. A student is not entitled to receive an annuity for any month in which he or she works in the railroad industry.

(9) When does a student's eligibility end?

Entitlement to an annuity ends when a student reaches age 22, marries, or stops attending school on a full-time basis. However, benefits can be extended through the end of the quarter or semester in which the student attains age 22, if the student is in full-time attendance in the month he or she attains age 22, and has not yet completed the requirements for a bachelor's degree.

(10) Is a student obligated to notify the Board if he or she decides to stop attending school full-time or to marry?

Yes, he or she should notify the nearest district office of the Board immediately, in order to avoid a possible overpayment which may be difficult to repay. ANY CHECKS THE STUDENT RECEIVES IN ERROR SHOULD BE RETURNED UNCASHED TO THE BOARD. It is also the students' responsibility to report earnings to the Board if he or she expects to earn more than $3,240 in 1978.

(11) Can children of a retired employee qaulify for benefits during the retireee's lifetime such as those provided for the children of a deceased employee?

Only in a small number of cases. Annuities are not directly payable to children while a retiree is living, even though such benefits are payable under the Social Security Act. In the great majority of cases, railroad retirement benefits to an employee and spouse exceed the amount that would be payable to the family under the Social Security Act. However, there is a special guaranty that includes benefits to qualified children as well as students to ensure that no family will receive less in railroad retirement benefits than they would have received under social security.

Signalmen Wanted

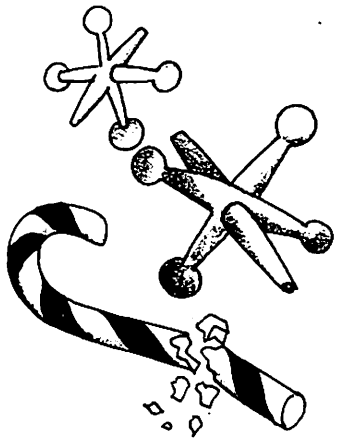
Signalmen's positions on the Atchison, Topeka & Santa Fe Railway are available in Arizona, California and New Mexico. If interested please contact Paul C. Qualls, Employment Supervisor, Santa Fe Railway, 80 East Jackson Boulevard, Chicago, IL 60604.

An Equal Opportunity Employer

Service Sales Engineer

A leading manufacturer of batteries and battery chargers is seeking a knowledgeable Service Sales Engineer. Position requires traveling covering midwestern railroads. Railroad signal or electrical experience required. Excellent employee benefits and good opportunity for advancement. An equal opportunity employer. Send resume to Box Z, The Signalman's Journal, 601 West Golf Road, Mt. Prospect, IL 60056.

HOLIDAY HAZARDS

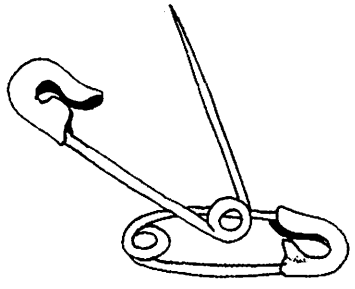


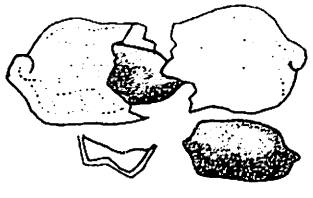
From Halloween to Happy New Year, American homes abound with snack foods, peanuts, candies, trinkets and toys. Attractive to toddlers. And dangerous.

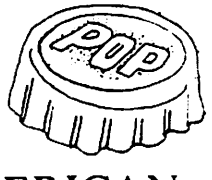
Such small objects can stick in the throat, causing choking—even death. Or be inhaled into the lungs to cause serious trouble.

Protect preschoolers by keeping such items out of their reach.

Your Christmas Seal gift also helps defend young lungs. When the colorful seals created by American schoolchildren arrive, be generous.







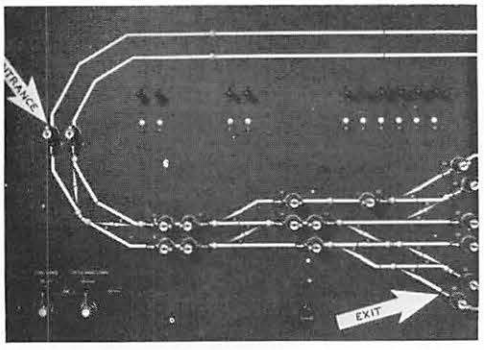
AMERICAN LUNG ASSOCIATION
The "Christmas Seal" People
We care about every breath you take

Interlocking: Entrance-Exit

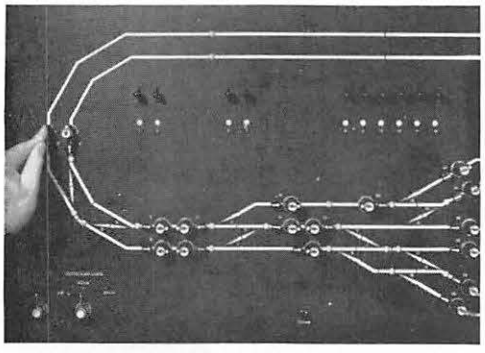
End-to-End Routes

The "end-to-end" route line-up saves time where many intermediate signals are involved.

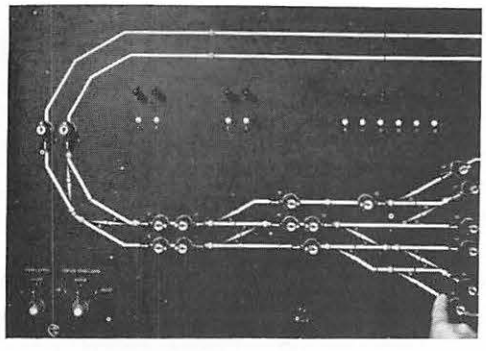
The following picture sequence shows how an end-to-end route is lined up on a movable route indicator panel:



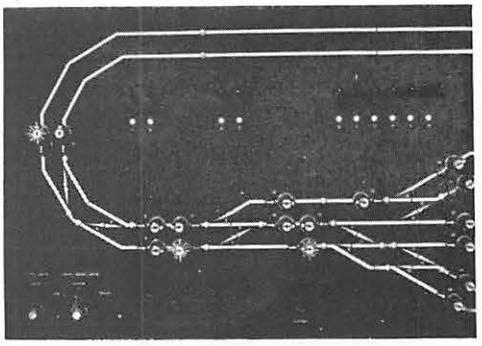
A long route comprising several sections could be lined up similarly from beginning to end by pressing each entrance knob and exit button having an arrow pointing in the same direction.



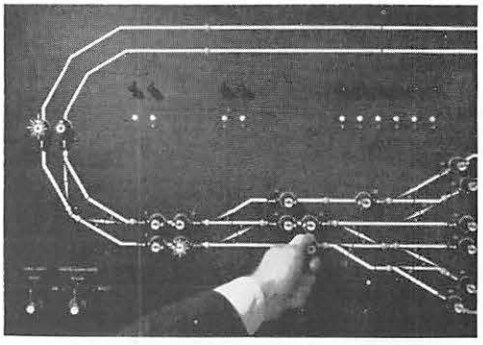
The end-to-end feature reduces this manipulation. The operator presses the entrance knob at the very beginning of the route.



He skips over the intervening buttons and presses the exit button at the very end of the route.



Route indicators line up, switches operate, signals clear (including the intermediate ones), and steady lights appear in the corresponding entrance knobs.



If the operator wishes to cancel any section of the route, he pulls the entrance knob. This puts the corresponding signal to stop and, if no train is approaching, releases the switches in that section.

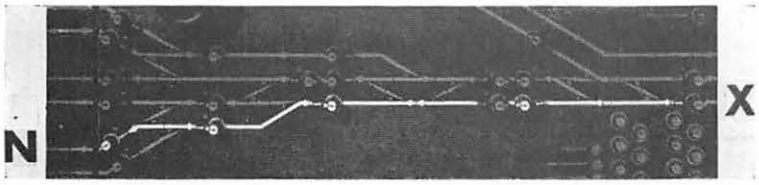
And so it goes, the NX system in each case automatically operating the required switch and signal functions.

Automatic Route Selection

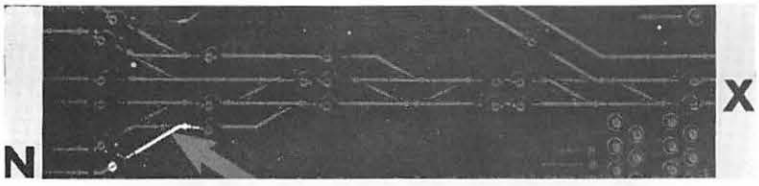
In a terminal or yard there usually are several routes between any two points. If one is obstructed, the operator can line up a second; but this takes time, as the optional or secondary routes are usually more complicated than the straight-forward, preferred route.

With NX, however, the operator presses the entrance knob, and the exit button at the two ends of the route. If the preferred route is not available, the next best optional route is lined up instantly. The picture sequence of a movable route indicator panel tells the story.

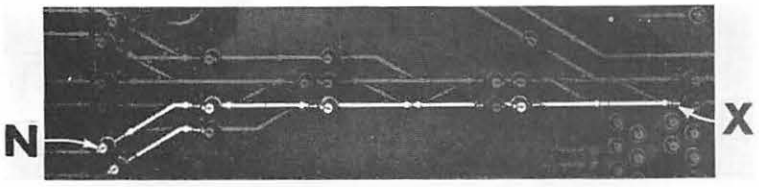
Information and drawings furnished by General Railway Signal Company.



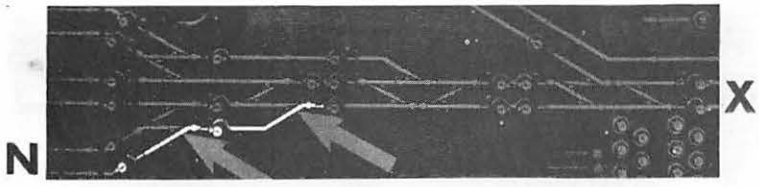
Here is preferred route from entrance "N" to exit "X."



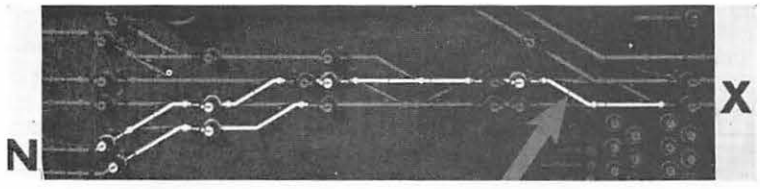
Suppose that, before operator lines up route from N to X, the switch (arrow) is used by the short route indicated.



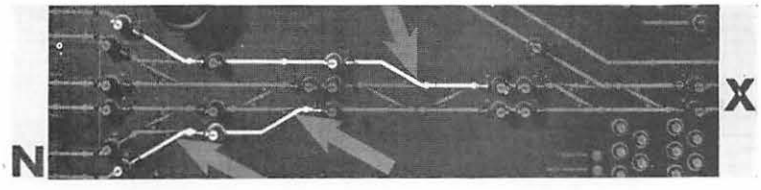
Now if the operator presses entrance knob N and exit button X, the NX system automatically lines up this next best route.



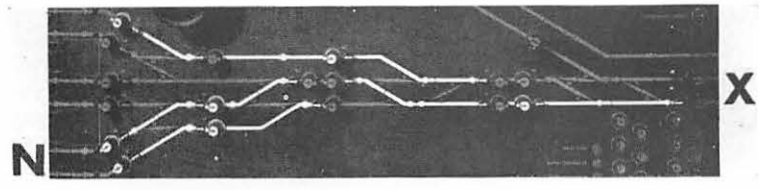
To go a step further, suppose that the two switches (pointed out by the arrows) are used by the short route indicated, and the operator still wishes to line up the route from N to X.



This is the new route N to X. Note there are two possible crossovers that could have lined up, but the NX system chooses the one marked with an arrow because it is a high-speed crossover.



A third possibility exists in that the two routes indicated may be lined up. To line up a route now from N to X would ordinarily take some "figuring" on the part of the operator.



With NX, he again presses entrance knob N and exit button X; a route is immediately lined up.

What are your chances of getting cancer?

This check list is a first step in the process that could save your life.

CANCER OF THE COLON & RECTUM

- ☐ Have a history of polyps.
- ☐ Have blood in your stool.
- ☐ Have ulcerative colitis.

Absolutely nothing is more important to surviving cancer than early detection is.

So if you checked any boxes, you should discuss them with your doctor soon.

We want to cure cancer in your lifetime. But we'll never do it without your help.

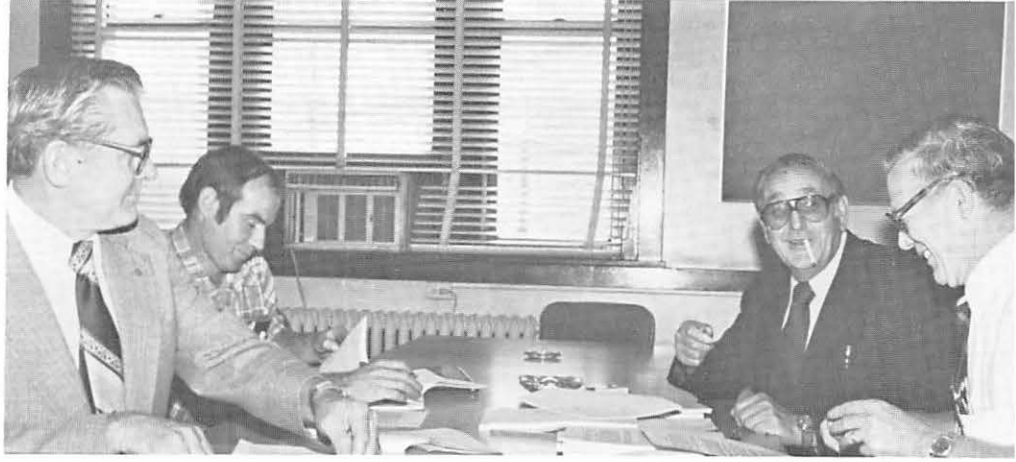
American Cancer Society

Signalmen sign new agreement with P&LE

Signing the new agreement reached between the Brotherhood of Railroad Signalmen and the Pittsburgh & Lake Erie are (from left to right): Richard D. Jones, director labor relations & personnel P&LE; watching is J. Gregg Parkins, manager of labor relations, P&LE: E. J. Bickar, general chairman; and Witt B. Harwell, Jr., BofRS vice president.

Some last minute negotiations were carried out on the morning of the signing, Oct. 5, 1978. Facing the camera are Witt Harwell (left) BofRS vice president and Ed Bickar, general chairman, P&LE. On the other side of the table are John D. Rock, superintendent signals & communications (below left) and J. Gregg Parkins, manager labor relations.

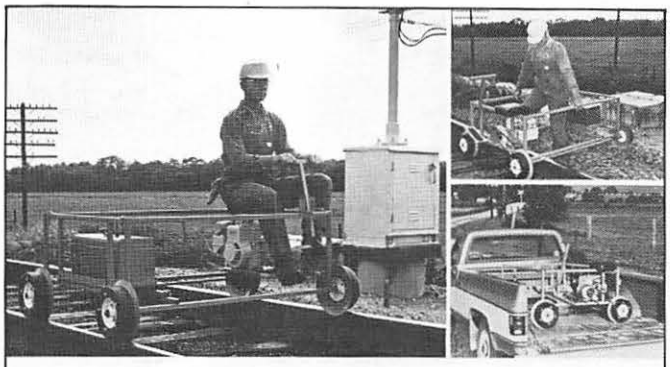
Pens were busy (left) as Jones, Bickar and Harwell signed letters of understanding as well as several copies of the new agreement reached between the Pittsburgh & Lake Erie and its signal department employees represented by the Brotherhood of Railroad Signalmen.



There were some relaxed moments during final negotiations on Thursday morning before signing the BofRS-P&LE agreement. From the left are: Witt Harwell, BofRS vice president; Ed Bickar, general chairman; John D. Rock, superintendent signals & communications, P&LE; and Gregg Parkins, P&LE manager of labor relations.

Just before the signing of the new agreement, Harwell and Jones commented that there had been cooperation on both sides in negotiating the new agreement. Called in to witness the signing was Joseph L. Gerst (left) chief engineer, P&LE. Left to right from Gerst are: J. D. Rock; Richard D. Jones, director labor relations & personnel, P&LE; J. Gregg Parkins, P&LE manager of labor relations; E. J. Bickar, BofRS general chairman on P&LE; and Witt B. Harwell, Jr., BofRS vice president.

Signalman Sam says: Checking cables and wires for faults and grounds is an important part of signal maintenance. Safety depends upon good signal work.



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Head table at the Illinois Central Gulf general committee meeting in August included (from the left): Billy Joe Woodruff, general chairman; W. D. "Dink" Best, BofRS secretary-treasurer; Witt B. Harwell, Jr., BofRS vice president; and R. Thomas Bates, BofRS president.

ICG general committee elects officers

Shown here (left to right) are: Jackie D. Warden, local chairman, Gilman Lodge 81; Harold L. "Bud" Hansen, local chairman, Springfield Lodge 163; Ralph Vallandingham of Cairo Lodge 51; J. W. Davis, local chairman, Lodge 51; Howard L. Cash, recording & financial secretary, Kentucky Lodge 46; and James K. Smith of Miss-Lou Lodge 107.

Also attending the ICG general committee are (left to right): A. J. Louder, local chairman, East Dubuque Lodge 29; Ken G. Williams, local chairman, Lodge 29; D. H. Lattner, recording & financial secretary, Lodge 29; David J. Hoyle, recording & financial secretary, Jackson Lodge 191; and Freddie R. Stearns, local chairman, Lodge 191.

From the left: W. D. Best, BofRS secretary-treasurer; B. J. Woodruff, ICG general chairman; Michael J. Hagan, manager of labor relations, ICG; Katie Safstrom, labor relations officer, ICG; R. T. Bates, BofRS president; and W. B. Harwell, Jr., BofRS vice president.

At the ICG general committee meeting are (from the left): Don L. Fennel, local chairman, Memphis Lodge 162; Paul E. Johnson, local president, Alton Lodge 85; B. D. Blair, recording & financial secretary, Lodge 85; Archie M. Sowers, of Lodge 85; I. E. Williams, recording & financial secretary, Springfield Lodge 163; Ester G. Saylor, Jr., of Grand Crossing Lodge 70; Michael E. Erwin of Lodge 70; and Paul H. Behrendt, local chairman, Lodge 70.

The Illinois Central Gulf general chairman met on August 26, 1978 at Champaign, IL. Officers elected for the next three years were:

— Billy Joe Woodruff, general chairman and general secretary-treasurer.

— Jackie D. Warden, first vice general chairman.

— Harold L. Hansen, second vice general chairman.

— Three trustees: A. J. Louder, chairman; Paul H. Behrendt and Ralph P. Vallandingham.

Subjects receiving much discussion included voting in the general committee; seniority; working conditions; manning of signal shops; and concern about Southern Railway's purchase of the ICG.

President Bates described the national negotiations and the events that led up to signing of an agreement by the Brotherhood with the nation's railroads.

Michael J. Hagan, ICG manager of labor relations, discussed the possible purchase of the railway by the Southern. He said that while Southern officials had been on ICG property to become better acquainted with the physical plant, no firm offer has been made for the purchase. He estimated that a timetable for purchase, if accepted by IC Industries, would be at least two years. Approval will have to be obtained from the Interstate Commerce Commission.

Following a luncheon, the ICG general committee visited the signal training facility of the railway in the Champaign depot.

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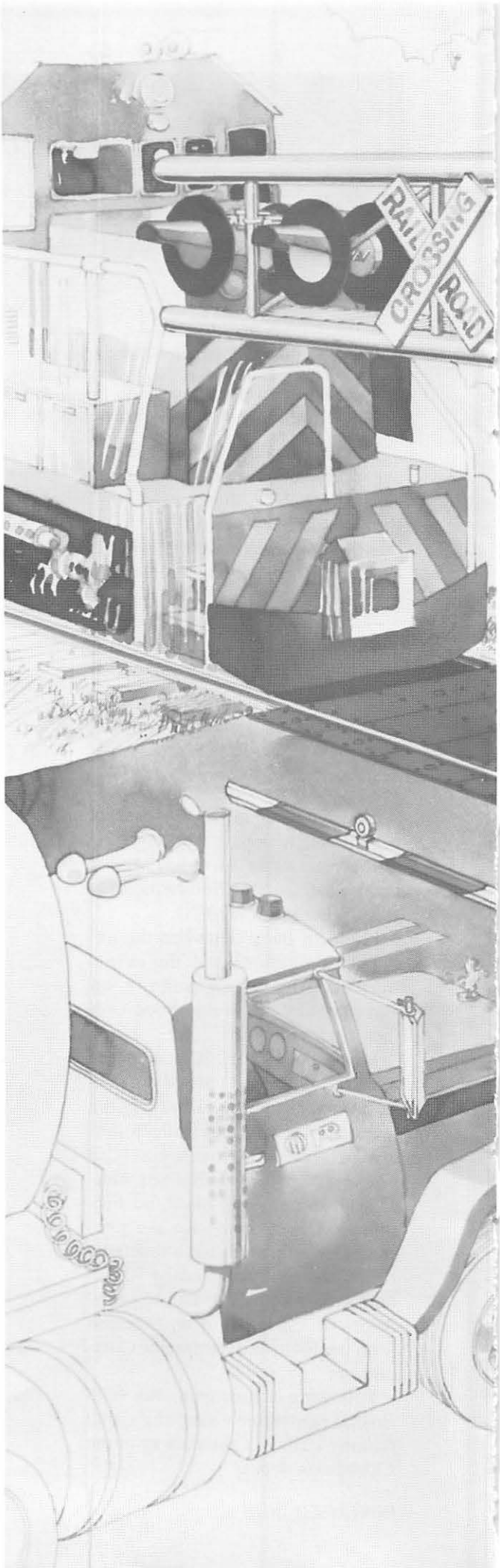

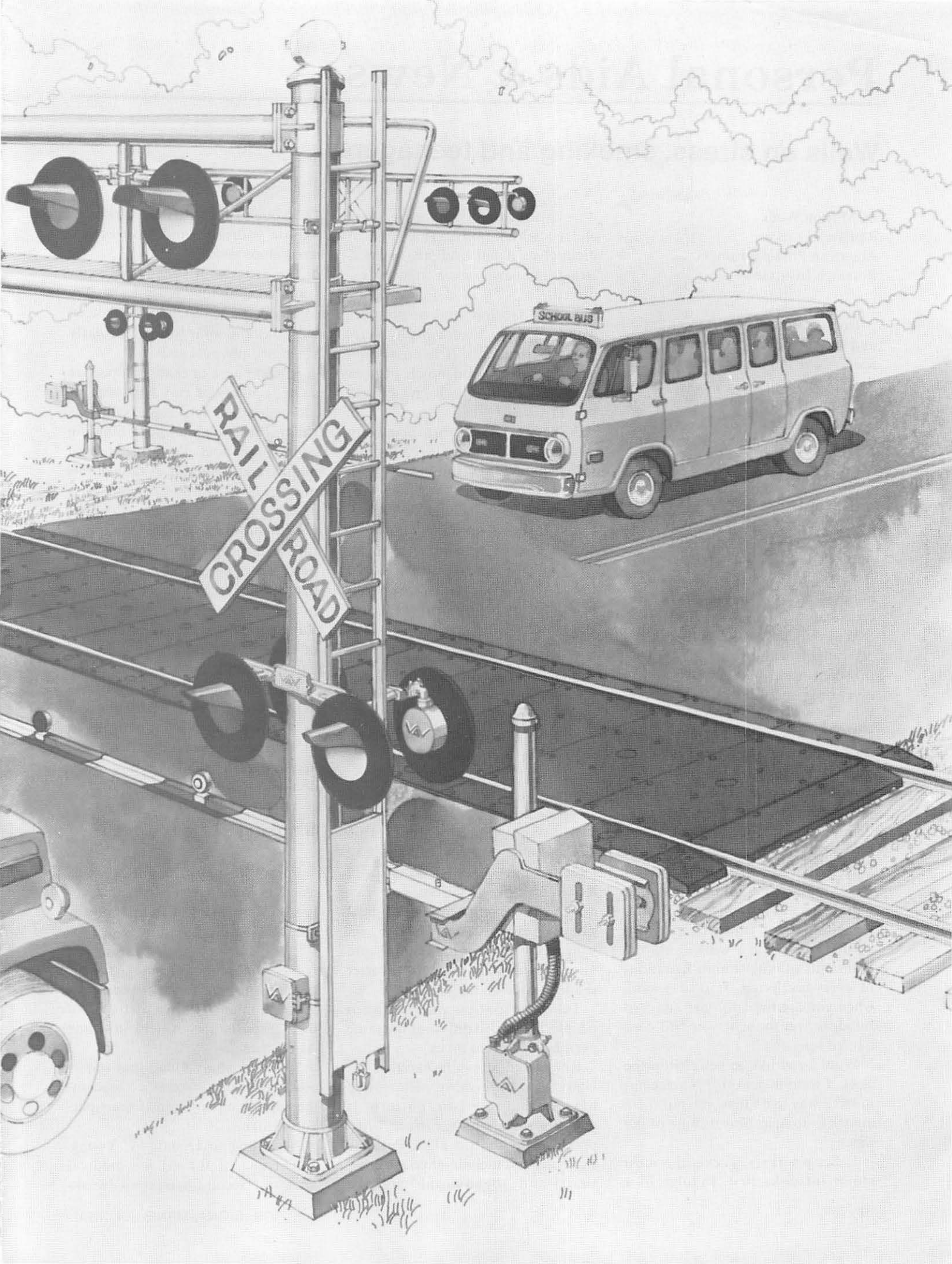
SCHOOL BUS
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CROSSING

Personal Aids & News

Wells on stress, smoking and teenagers

By **Marion Wells**
Research Director
American Physical Fitness
Research Institute

Do you find yourself doing more and more and enjoying it less and less? You're not the only one with "to do list" blues.

"Routine panic" is " . . .becoming an American way of life. . .." psychologist James Dobson says. And he points out that " . . . every obligation which we shirk is a source of guilt. When there are more commitments than we can possibly handle, then self-esteem is further damaged by each failure. 'I'm really a lousy parent; I'm too exhausted to be a good wife; I'm disorganized and confused . . .'"

Will our family life and children get caught in the squeeze? Witness this conclusion to a nine-year-old's essay on grandmothers: "Everybody should try to have a grandmother, especially if you don't have television, because they are the only grown-ups who have time."

Our jet-propelled schedules may be responsible for more "jet lag" than our jet-propelled planes. In his book, "What Wives Wish Their Husbands Knew About Women," Dr. Dobson writes, "Physical depletion renders us less able to cope with the noisiness of children, the dishwasher that won't work, and the thousands of other minor irritations of everyday living. It is also said, when you are tired you are attacked by ideas you thought you had conquered long ago."

Would you like to yell, "Stop the clock, I want to get off"? No one has found a way to do that, yet, but there are tricks to help beat it some of the time.

1. Set priorities. Tackle the most important tasks first. Indulge in a little "planned procrastination" with chores which may take care of themselves if left undone, like watering the lawn when rain is expected.

2. Buy clothes and appliances with an eye to timesaving features and maintenance. If a possession starts possessing too much of your time, ask yourself if it's worth keeping.

3. Before taking on a new commitment, Dobson suggests asking yourself three key questions: "Is it worthy of our time? What will be eliminated if it is added? What will be its impact on our family life?"

You also deserve some time for yourself, to relax and recharge, for the sake of your sanity and your health. Stop before your schedule stops you!

When you're hurried and worried and feel yourself disappearing under the pile, how can you "get out of the spin you're in?"

Simple strategies can help you cope. Here are some key points to note.

Stress from various sources has a way of adding up. An overloaded desk, a fight with the kids, a traffic jam and other assorted pressures all become part of the same pile. Reducing stress where you can leaves more energy to handle pressures you can't change. Relaxing on your lunch hour, in the evening and on weekends may put you in better shape to cope on the job.

Tolerance to stress varies between people. It can also differ for the same person at different times.

Renowned stress researcher Dr. Hans Selye believes we each tend to have a characteristic pattern of warning signs which surface when pressure builds too high. Possible signs of stress include physical, emotional and "behavioral" signals. Everyone's different. The trick is to "know yourself" and stop before stress stops you.

The better your health, the better your "cope-ability" is apt to be. Try to get adequate rest, a well balanced daily diet and some form of regularly scheduled physical activity.

A brief pause or change of pace at strategic intervals may help you get more done in less time with less strain. Tension has a way of building as tiredness does. Performance and output tend to fall off as fatigue sets in.

A change of pace can also be a plus for problem solving. Our ability to use information, think clearly, make decisions and solve problems may suffer if we're under too much pressure, said Rae Sedgwick, Ph.D. But experts say creative solutions often come to light after a matter is left to simmer on a mental "back burner."

Dr. Selye believes what counts is " . . . not so much what happens to us, but the way we take it." How you take stress can help decide how much it takes out of you!

Smoking

For a number of reasons, parents would do well to post and themselves heed a sign saying, "Thank you for not smoking in front of my kids."

"One major study found that babies of parents who smoke have a much higher incidence of bronchitis and pneumonia in the first year of life," reports the American Lung Association.

"Another study found that respiratory problems were twice as common in young children if their parents smoked."

According to Donald A. Young, M.D., one of the ALA's medical advisors, "Second-hand smoke weak-

ens the lung defenses, steps up the heartbeat, increases the blood pressure and reduces the body's oxygen supply."

The health of more vulnerable children and adults is especially likely to suffer. Those with heart or respiratory problems fall into this category. "An estimated two million Americans are sensitive to tobacco smoke and suffer smoke-caused asthma attacks," the ALA says.

Still another price of parents' puffing is the risk of passing on the smoking habit itself. Dr. Young calls parents' habits ". . . a strong influence on children. Most teenagers who smoke, have parents who smoke."

Such a legacy raises the next generation's risk of chronic lung disease, of which cigarette smoking is considered the major cause. Moreover, each year smokers spend some eighty-eight million more days sick in bed than nonsmokers. Effects of smoking prematurely puff out an estimated three hundred thousand American lives annually.

Is it worth letting smoking cheat both you and your children out of a better "life and breath" chance?

Teenagers

Why do some become adult teenagers and others act like adolescent adults?

"Taking responsibility for yourself takes practice," says Richard MacKenzie, M.D., head of the Division of adolescent Medicine at Childrens Hospital of Los Angeles. "You don't get instant maturity the day you turn twenty-one. That's like expecting someone to learn to ride a bike without ever letting them get on."

Developing a separate identity and decision-making skills is the basis of the adolescent process, he adds. He believes many sticky situations can be avoided if parents take the initiative. Mom and Dad can make it okay for teens to start freeing themselves in healthy ways. A seemingly small event can have a big positive impact.

What if Janet asks, "What time do I have to be in from the school prom?" Here's a chance to let her know you realize she's growing up.

You could give her some responsibility, MacKenzie pointed out. "What time do you think you should be in?"

Suppose she's fourteen and she says, "Three o'clock in the morning"? You'll probably have to tell her, "That's pretty late, and I'd be rather concerned. Since it's the prom, how does such and such a time sound?" Then you could begin to bargain, but at least she's had some input. It gives her a chance to enter the decision-making process and then take responsibility for a choice she had some part in making.

MacKenzie says doing some creative listening can help teens develop coping resources. That's a key concept behind the teen HOTLINE run by Childrens Hospital.

Rather than automatically giving solutions, HOTLINE "listeners" are trained to try to hear and "feed back" what the caller is really expressing. Hopefully this adds perspective and deepens awareness so the caller can start doing some of his or her own problem solving. This boosts self-esteem.

Dr. MacKenzie also points out that part of growing up is seeking outside resources. Parents sometimes find this disturbing.

"The family may be very aware and understanding," he reassures. "But there comes a time when a teen wants to reach out and get someone else's input. It may be a teacher, school counselor, rabbi or pastor, football coach, doctor, or the neighbor down the street."

He believes the important thing is that parents get a feel their youngster has reliable resources to turn to, people who can either help or facilitate contact with someone who can.

Parents are apt to keep in closer touch with teens if they set up some lines of communication early, he advises.

You can let them know in early adolescence, "The next few years will be challenging for both of us. Each of us may get some wrong ideas about the other. There may be times when things get so tough for you that you can't respond, and I may have to make some decisions for you. That's not where I want to go, however. I don't want to make decisions for you the rest of your life. We may both slip now and then. But let's try to catch it, laugh at ourselves, come back to center and reopen the lines of communication."

Credit Cards

By Sidney Margolius

Even credit unions now are beginning to offer credit cards you can use to charge almost anything from clothing to vacations and even burial services. The entry of these last straight installment loans shows how plastic credit is gripping the U.S. public.

But the offerings by credit unions, in this case the Visa card, may be a help to people who prefer this kind of prearranged credit. Credit unions usually charge less. Most charge a maximum annual percentage rate (APR) of 12% or, in a few states where a grace period is provided, 15%.

In contrast, most state laws permit commercial lenders and sellers to charge 18% APR on the first $500 or so of credit and 12% over $500. Only a few states set the maximum at 15% or less.

A relatively small number of credit unions so far are offering credit cards to members, and your own may not yet have it. But the number is growing steadily. Last October, 23 credit unions around the country started to offer the cards. By April there were 54 in 19 states, reports Ellen Lovell, of the Credit Union National Association. Those offering or expected to offer the cards are mostly larger credit unions.

But ready forms of credit like charge-account cards need to be used with special caution even when the interest rate is lower. It's easier to get into debt. Recent hard-sell campaigns by banks, mainly aimed at

getting people to use both Visa and Master Charge, already have helped pile up debts. Total outstanding installment debts, not including mortgages, have jumped almost 120% since 1967 and have reached a record national total of $216 billion. This is a rather frightening increase of 17% in just one year.

Nor can the big jump in debts be attributed just to inflation. In comparison, prices have gone up 88% since 1967 and 6.4% in the past 12 months.

The facts are that consumers are using credit more and more, and lenders and sellers are pushing it harder and harder.

While car loans still comprise the largest total debts, the greatest increase in credit use is in bank credit card use, Federal reserve reports show. With nearly 500 million such cards floating around we now have more credit cards than people in this country, or almost two and a half for each man, woman and child.

Behind the expansion in use of plastic credit is intensified competition among their sponsors. BankAmerica says it's out to make its re-named Visa card "the biggest shopping and travel card." The demand has shot up, banks say. An envelope insert spurred a 20% increase in applications in one month, an Eastern bank reports.

Master Charge and other issuers have flung back the challenge; you even may have heard them on your phone or received their circular. "Master Charge card has clout!" says one bank. "You'll have access to instant cash, anytime . . . You'll be able to pay unexpected expenses by using Master Checks."

Airlines also now are extending their credit cards to cover hotels and package vacations as well as the trip itself. Oil companies are in pursuit of young people especially. One recent college graduate says he received applications for credit cards from six oil companies in his last month at school.

The big sell for plastic credit is only one of the many pressures on people to take on more debts. Personal loans "for anything from appliances to bongo lessons" are still very active. Many people also have borrowed recently to install insulation and for "mother and daughter" and other dwelling expansions in an era of high prices of houses.

Higher car prices also are spurring bigger, longer debts. New-car loans which usually were 36 months now often are 42 and 48 months. Longer repayment adds to your interest costs.

Other forces also are pushing borrowers into longer terms which pyramid debts. The trend in bank credit cards is to bill you for one thirty-sixth of your balance each month instead of one twenty-fourth. While you can still pay your entire balance or any part at any time, the tendency to pay the amount called for, means you'll take longer and pay more finance charge.

An important fact to understand is that on bank credit cards, although not on credit union cards, you usually do have to pay higher interest rates on purchases made on a credit charge card than on regular personal loans, home-improvement loans, and even the cash advances available on the same credit cards.

Take a look at the agreement under which the bank card was issued to you to see whether you can borrow the cash at a lower rate.

The reason for the higher rates on merchandise charges is that the amounts involved usually are smaller and also require more complicated processing.

Using two bank credit cards, whether from the same or different banks, can pose another danger in states that permit a split rate such as 18% on the first $500 and 12% over $500. You may find yourself paying 18% on two accounts instead of getting the lower rate on at least the debts over the stipulated amount if you used just one card.

In New York, Attorney General Louis Lefkowitz recently did urge banks to compute charges on two different cards issued by the same bank as though they were a single account. If you and/or your spouse have two different cards see how your bank treats the accounts.

"How come when he does something right, it's because you trained him, but when he does something wrong, it's because he's my assistant?"

Some helpful hints on selecting a home

Home may be where the heart is, but to find the kind of home your heart wants, takes time, money, and quite a bit of planning.

A newly revised publication from the U.S. Department of Agriculture can help you answer those all-important questions, such as whether to rent or buy, how much to spend, how to shop for a mortgage, and what insurance you should buy. To get your copy of *Selecting and Financing a Home*, send $1.10 to the Consumer Information Center, Dept. 091F, Pueblo, CO 81009.

A successful search begins with some basic decisions. Do you want to rent or buy? Homeownership offers certain tax advantages you don't get by renting. Real estate taxes and the interest you pay on your mortgage are tax deductible if you itemize. However, renting tends to be more flexible than ownership. You're only committed for the time of the lease. And often rent includes utilities and other services.

If you decide to buy a home, financing will become the prime question. The rule of thumb is to spend no more than two to two and one-

half times your total annual income for your home or no more than one-fourth of your gross monthly salary for your housing expenses.

To reach a final decision about how much you're willing to spend, you'll need to think about three things: 1) the amount you can budget for housing, 2) your cash reserves, and 3) your future financial prospects.

Don't wait until it's too late to find out you have overspent and are "house poor". On the other hand, remember that mortgage payments will remain fixed (except for tax increases) throughout the life of the loan. As your salary increases over the years, it should get easier to meet those monthly payments.

What does it cost for a mortgage loan? This depends upon the mortgage interest rate, the downpayment and the amount of the loan, and the number of years until the loan is paid off. Many loans may also require mortgage insurance of "discount points".

Effect of interest rate on cost of a $40,000 loan over a 25-year period

Interest rate (percent)	Monthly payment (principal and interest)	Total interest (over 25 years)
6½	$270	$41,020
7	283	44,810
7½	296	48,680
8	309	52,620
8½	322	56,630
9	336	60,700
9½	349	64,840
10	363	69,040
10½	378	73,300

NOTE: Monthly payment rounded to nearest $1; total interest rounded to nearest $10.

The chart here shows how the interest rate you agree to pay affects the total cost of your home. Even one-half of 1 percent can make a big difference in the long run. For example, on a 25-year, $40,000 mortgage, that half of a percent adds $13 a month or a total of about $4,140 more in interest.

After planning for a mortgage, you'll also want to learn about closing costs and protection for your home through various types of insurance policies.

Veterans have job rights; what they are

What The Law Says . . . Chapter 43 of Part III of Title 38, U.S. Code, provides a reemployment rights program for men and women who leave their jobs to perform training or service in the Armed Forces. The Office of Veterans' Reemployment Rights has the responsibility for informing veterans and employers of the reemployment program and assisting them in connection with any problems they may have. The purpose of this law is to ensure that those who serve their country in the interest of national defense do not lose their jobs and other employment benefits because of such services.

Who Is Eligible? To be entitled to reemployment rights a veteran must:

1. Leave a position (other than a temporary position) with a private employer, the Federal Government, or a State or local government for the purpose of entering the Armed Forces, voluntarily or involuntarily. Part-time and seasonal positions are not necessarily temporary positions.

2. Serve for not more than 4 years after August 1, 1961, *plus* a one year additional voluntary extension of active duty *(5 years total)** if this is at the request and for the convenience of the Government (and plus any involuntary service). Only active military service entered from employment to which restoration is claimed is to be included in computing the time limitations on service.

3. Satisfactorily complete the period of active duty and have a certificate to that effect.

4. Be qualified to perform the duties of his position. If he is disabled during military service and cannot perform the duties of his old job, he may be entitled to the nearest comparable job he is qualified to perform.

5. Make timely application for reemployment after release from military training or service or from hospitalization continuing after discharge for a period of not more than 1 year. Application must be made within 90 days after completion of military service; within 31 days after completion of initial active duty for training of not less than 3 months.

Employer's Obligation: The employer's obligations are to:

1. Reemploy the veteran within a reasonable time after he makes application in the position he would have occupied if he had remained on the job instead of entering military service. This could be the same position, a superior position, an inferior position, one of like seniority, status, and pay, layoff status, or no position at all, depending upon collective bargaining agreements, nondiscriminatory personnel policies and practices, or changes in the employer's business during the veteran's absence which may make it impossible or unreasonable to reemploy him.

2. Restore the veteran without loss of seniority. There are, however, some conditions under which the adjustment of seniority incident to a missed opportunity may be deferred until after the veteran has been reemployed and has met a special work requirement under a collective bargaining agreement or established practice. Where, under a collective bargaining agreement or established practice, the employer requires an employee to meet a special work requirement, the veteran's seniority should be adjusted upon completion of the work requirement so that his period of military duty does not cause him to lose ground to other employees who continued in their employment. Once having completed the work requirement he is entitled to a seniority date which takes into account time spent in military service. One of the most important features of the reemployment program is the protection it gives the veteran against the loss of seniority

*Reservists recalled after a period of service since August 1, 1961, may retain a longer protected period.

due to military service, since seniority or length of service often determines job assignments, pay, status, vacation, pension rights and other benefits.

The length of service or seniority a reemployed veteran has with his preservice employer generally includes:

(a) His employment before military service,

(b) A reasonable period between leaving his job and entering military service,

(c) The entire period of his military service,

(d) The period between his release from the service and his return to work.

3. Pay the veteran at the level he would have attained had he not left for military service. This usually includes all general, cost-of-living and length of service increases, but may not include merit increases based on performance standards prescribed by contract or established practice.

4. Restore the veteran to the status he would have enjoyed with respect to such working conditions as choice of job shifts, place of employment and other elements of the job, particularly where they are governed by length of service.

5. Allow the veteran to participate in insurance, pension, and other such benefits maturing after this reinstatement to the same extent he would be participating if his employment had continued without interruption by military service, and treat him according to rules and leave of absence as far as such benefits maturing during his military absence are concerned.

6. Retain the veteran in employment for a period of not less than 1 year, unless he is discharged for cause or there is a layoff which reaches him in seniority order in accordance with a contract or established practice. Retain the reservist who returns from initial active duty for training in his employment under the same conditions for a period of 6 months.

Using OSHA could save your life

By Dr. Eula Bingham
Assistant Secretary of Labor
for Occupational Safety & Health

Your work may be hazardous to your health—and you can do something about it. Twenty-one million Americans, or one out of every four workers, are exposed to dangerous substances at their workplace—substances which can cause skin disease, breathing problems, or cancer. One out of three production workers faces hazardous on-the-job noise. Millions of workers are injured each year in workplace accidents.

One tool you should use to protect yourself is the Occupational Safety and Health Administration, known as OSHA. Under the common sense approach started after I was appointed to direct OSHA last year, our agency is working to help guarantee your right to know about workplace dangers and how to correct them.

Because of limited resources, OSHA by itself cannot possibly provide the protection you need. With only about 1,400 inspectors, it would take us more than 75 years to make one visit to every workplace in the United States.

So it's up to you and your union to be the first line of defense against on-the-job dangers—but OSHA can help:

- If there is an imminent danger at your workplace, and your employer fails to correct it immediately, contact OSHA. If an OSHA inspector finds an imminent danger, he or she will ask your employer to take action. If necessary, OSHA can go to federal court to force your employer to remove the hazard.
- In other situations in which you feel there is a hazard at your workplace, discuss it with your fellow workers and your union representative, and ask your employer to correct it. If you need more help, OSHA can make an inspection without giving the employer your name. A workers' representative may accompany the inspector, and must be paid by the company for his or her time.
- Under the law, you cannot be discriminated against, fired, demoted, or otherwise penalized for calling an OSHA inspector, or for complaining about a hazard to your employer or your union. If necessary, OSHA can take legal action against your employer. Your employer may then be forced to reinstate you to your job with back pay.

To contact OSHA, look in your phone book under "United States Government," Department of Labor, Occupational Safety and Health Administration, or write to OSHA, 3rd and Constitution Ave., N.W., Washington, D.C. 20210.

Your blood pressure is important

Today your blood pressure is _____. The first or top number measures the FORCE of your heartbeat pushing blood from the heart into the vessels (systolic pressure). The second or bottom number measures the pressure when your heart is at rest between beats (diastolic pressure).

When these numbers get too high (in adults that's usually anything over 140/90) it means that there is too much pressure or STRAIN on your heart and blood vessels.

High blood pressure is very common. One out of seven adults, or 23 million Americans, has high blood pressure. Hypertension is another term for high blood pressure and means the same thing.

You might have it and not know it. High blood pressure has no symptoms. You may feel fine but if you are told you have high blood presure ... don't ignore it! If untreated, it can have serious consequences.

If you do have high blood pressure and don't get it treated, you run serious risk of heart disease, kidney failure, or stroke.

The *only way* to know if you have high blood pressure is to have your blood pressure measured by

someone specially trained.

If you are told that your blood pressure is normal, have it rechecked each year. It could get high next year and there's no other way of knowing, because high blood pressure has no symptoms.

Once you have high blood pressure, you will probably *always* have it—BUT, if you treat it, it can be kept under control. You can be healthy today and tomorrow if you keep your blood pressure under control.

If the doctor gives you medicine, take it *regularly*—not just when you remember to or when you feel like it. Before the prescription runs out—get more pills. And keep your appointments with your doctor. Together you can keep your blood pressure under control.

If you have HBP remember always to STAY ON TREATMENT.

If you have high blood pressure and believe any of the "myths" listed below, you may be endangering your health:

MYTH: High blood pressure is not a serious problem.

FACT: Wrong, dead wrong. Untreated high blood pressure is the leading cause of strokes, heart disease, and kidney disease. It is a major contributor to almost 100 deaths *each day* in this country alone.

MYTH: High blood pressure can be cured and treatment discontinued.

FACT: Most high blood pressure can be *controlled* but not *cured.* Treatment must usually be continued for life. There is no simple CURE for HBP—no miracle drug, no surgery, no injection that will bring your blood pressure down to a normal level once and for all. However, proper therapy can CONTROL HBP and keep it normal.

MYTH: Hypertension is nervous tension.

FACT: Although the name "hypertension" contains the word "tension," it does not mean "nervous" or "upset." It refers to the excessive pressure or force of the blood pressing against the walls of the veins and arteries as it travels through the circulatory system. Because people often confuse hypertension with nervous tension, many *incorrectly* believe that if they stay calm and relaxed they can control their high blood pressure.

MYTH: You can tell when your blood pressure is high.

FACT: High blood pressure usually has no symptoms, at least initially. There is no way you can tell that your pressure is up by the way you feel. Unfortunately, many people believe that when they suffer a headache, dizziness, and anxiety their blood pressure is up—and that's when they take their medication. This will NOT KEEP THEIR PRESSURE UNDER CONTROL. If prescribed by a doctor, medication must be taken regularly to lower and maintain blood pressure at normal levels. Feeling healthy is no guarantee that blood pressure is normal because there are no early warning signs—NO SYMPTOMS—to tell you when your blood pressure is dangerously elevated.

MYTH: If you have high blood pressure and are told by your doctor to take medication and also to lose weight, cut down on salt, stop smoking, and try to relax, you can *choose* which part of the complex treatment plan to follow.

FACT: *If your doctor prescribes medication,* taking it regularly is essential to effectively lowering your blood pressure. A change in life-style (smoking and eating habits) may be helpful, but not enough. These *additional* aids to lowering your blood pressure are not substitutes for your pills. If you're successful at your diet— that's fine. But don't stop your medication.

How to learn more about the railroads

"The Railroad- what it is, what it does" is a practical book about railroading. Although mainly directed toward the new employee, even veteran railroaders will find the material interesting. As one reader remarked: "It fills knowledge gaps in my own background, as it discusses areas in which I have not had a chance to function." It is written in a non-technical style, but will not offend those who have an understanding of railroading.

Its 22 chapters cover the entire spectrum of railroading: (1) Railroad technology- the tools of the trade; (2) The route system, how railroad networks evolved; (3) The tracks: alignment and structure; (4) The locomotive; (5) The railroad car; (6) The train; (7) Signals and communication; (8) Railroad operation- moving from here to there; (9) Car types and carloadings; (10) Car ownership and distribution; (11) Terminal operations; (12) Classification and blocking; (13) Line-haul operations; (14) Unit-train operations; (15) Intermodal traffic; (16) Special services and operations; (17) LCL/Forwarder/Consolidator, passenger traffic; (18) The Railroad organization; (19) Administration, law, accounting; (20) Operations; (21) Transportation; and (22) Engineering and equipment.

The Railroad- What It Is, What It Does by John H. Armstrong, Simmons-Boardman Publishing Corp., Educational Division, 1809 Capitol Ave., Omaha, NE 68102. Price: $14.95 each; 24 or more copies at $12.00 each; 100 or more copies at $9.00 each.

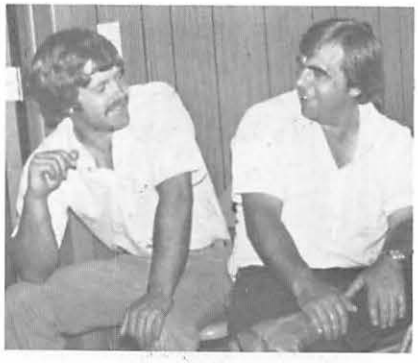
Local Lodge News

Chesapeake & Ohio Valley City Lodge 123 met in E. Lansing in August. Shown here (from the left) are: Douglas E. Peabody, financial secretary; Harvey H. Parker, general chairman; Robert L. Dankert, local president; and John P. Messock, recording secretary.

C&O local 123 elects officers

Members shown here (from the left) are: Harvey R. Vandall, Jr., second vice president; Charles J. Mays, trustee; and Acie Ayers.

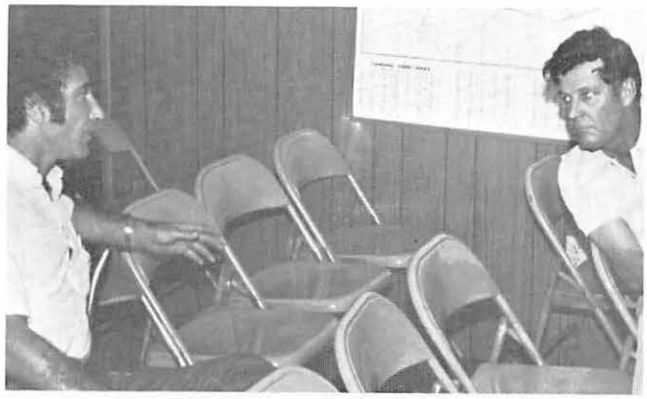
From left to right are: Clarence J. Hoaglin, member communications division grievance committee; William J. Brooks; and Donald J. Lane, local chairman, Grand Rapids division.



Jim F. Allarding (left) member Detroit division grievance committee, chats with Gale B. McVey.

Daniel J. Myers (left) talks to Jim Allarding.

John E. Hansen (standing) BofRS director of research, discussed the application of the Hours of Service Act to signalmen. At left is John Messock, trustee.



Edward Held (left) local chairman, Ann Arbor, talks to Melville E. Penrose, local chairman, Canadian division.

Shown here (left to right) are: Kenneth J. Snyder; Morgan Inman; Leonard B. Rauchfleish (rear); and Edward L. Valencia, first vice president and Detroit division local chairman.

During a break, Douglas Peabody (left) financial secretary talks to Harvey Parker, C&O general chairman.

John Messock (left) took down minutes of the meeting. Bob Dankert (right) is Saginaw division local chairman.

Valley City Lodge 123, C&O, elected the following officers at its August meeting: Local president- Bob Dankert; First vice president- Edward Valencia; Second vice president- Harvey Vandall; Financial secretary- Douglas Peabody; Recording secretary- John Messock; Chaplin- Bob Dankert; Sergeant-at-Arms- Buck Robertson; Trustees- Jack Mays, Ray Brass, John Messock; Assistant financial secretary- Vince Stanek.

Local chairmen elected were: Ed Valencia, Detroit division; Bob Dankert, Saginaw division; Don Lane, Grand Rapids division; Rick Shelton, communications division; Mel Penrose, Canadian division; and Ed Held, Ann Arbor.

Grievance committees members elected (in addition to local chairmen) were: Jerry Moyer and Jim Allarding, Detroit division; Dick Smith and Frank Demako, Saginaw division; John Messock and Alan Paul, Grand Rapids division; R. Wilkins and J. McKillop, Canadian division; and Clarence Hoaglin, communications division.

Tellers were Daniel J. Myers and Kenneth J. Snyder.

Mark C. Abner (left) and Thomas E. Hough attended the Local 123 meeting in East Lansing, MI in August 1978.

Morgan Inman (right foreground) and Leonard B. Rauchfleish (behind Inman) were at the meeting.

All You Will Need to Know About Metric

(For Your Everyday Life)

10

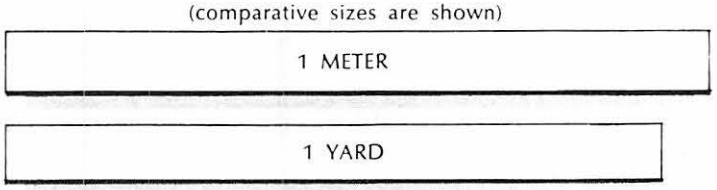
Metric is based on Decimal system

The metric system is simple to learn. For use in your everyday life you will need to know only ten units. You will also need to get used to a few new temperatures. Of course, there are other units which most persons will not need to learn. There are even some metric units with which you are already familiar: those for time and electricity are the same as you use now.

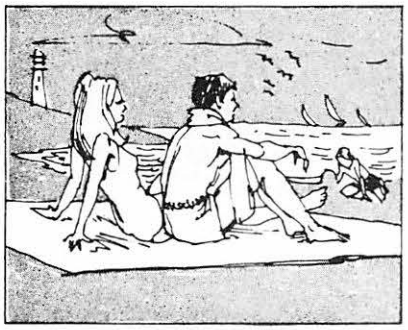
BASIC UNITS

METER: a little longer than a yard (about 1.1 yards)
LITER: a little larger than a quart (about 1.06 quarts)
GRAM: about the weight of a paper clip

(comparative sizes are shown)



25 DEGREES FAHRENHEIT

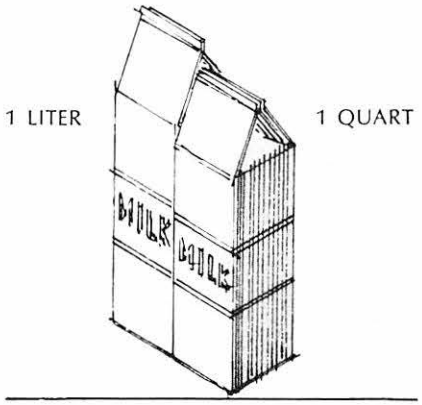


25 DEGREES CELSIUS

COMMON PREFIXES
(to be used with basic units)

Milli: one-thousandth (0.001)
Centi: one-hundredth (0.01)
Kilo: one-thousand times (1000)

For example:
1000 millimeters = 1 meter
100 centimeters = 1 meter
1000 meters = 1 kilometer

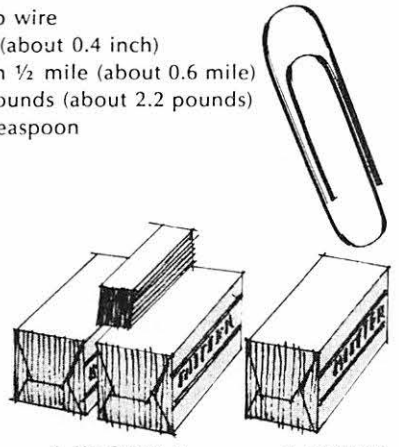


OTHER COMMONLY USED UNITS

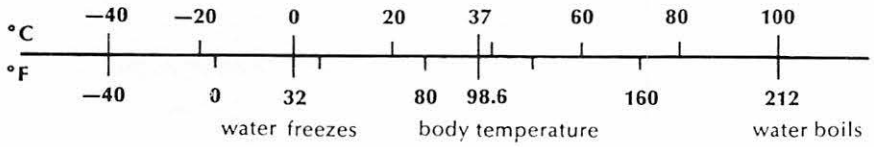
Millimeter:	0.001 meter	diameter of paper clip wire
Centimeter:	0.01 meter	width of a paper clip (about 0.4 inch)
Kilometer:	1000 meters	somewhat further than ½ mile (about 0.6 mile)
Kilogram:	1000 grams	a little more than 2 pounds (about 2.2 pounds)
Milliliter:	0.001 liter	five of them make a teaspoon

OTHER USEFUL UNITS

Hectare: about 2½ acres
Tonne: about one ton



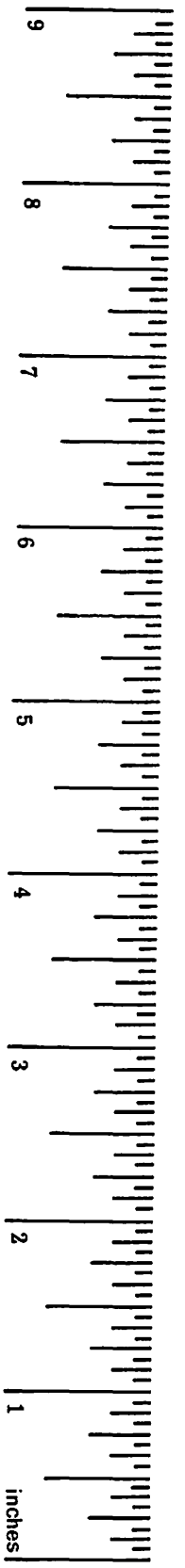
TEMPERATURE
degrees Celsius are used



METRIC CONVERSION FACTORS

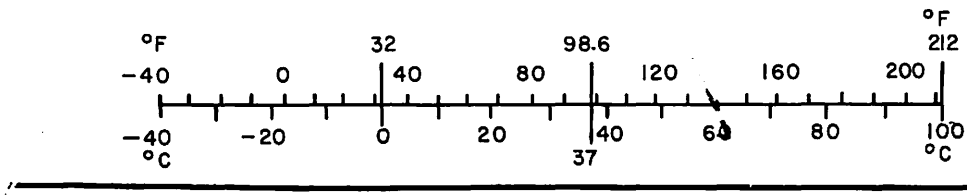
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



Railway unions serve notices

News from Canada

WAGES

January 1, 1979, all rates of pay in effect December 31, 1978 of the employees represented by the Associated Non-Operating Railway Unions shall be increased by an amount composed of the following increases:

First, all rates of pay in effect January 1, 1978 shall be adjusted to compensate for the cost of living increase during 1977 and 1978 in the amount not provided for in the 1976-1977 and 1978 settlements.

Second, an increase to eliminate the inequities created in the past so that all rates of pay be raised to the level it should be.

Third, an increase to ensure that all employees represented by this group get their fair share of the increase in real national product; this increase shall be equal to the long run increase in productivity per man-hour.

Fourth, an increase to ensure that all employees represented by this group are fully protected against the effects of inflation on their wages and salaries.

COST OF LIVING CLAUSE

A cost of living clause shall be incorporated in the agreement in order to fully guarantee the protection of real wages.

National standardization of rates of pay for all operators of motor vehicles, at the highest rate.

OVERTIME

All agreements shall be amended to provide for "double time payment for all overtime worked wherever time and one-half is paid."

All agreements shall be amended to provide for minimum call-in pay for 4 hours at the prevailing overtime rate.

SHIFT DIFFERENTIAL

Effective January 1, 1979, the existing shift differential to be increased from 15¢ to 25¢ and from 20¢ to 30¢ for all hours worked on the afternoon and/or night shifts. Such differentials shall be included in the calculations of overtime pay, and shall apply to all employees covered by this notice.

PENSIONS

(1) Automatic escalation of all pensions in payment to adjust for increases in the cost of living.

(2) Survivor pension to be 75% of employee's pension.

(3) No reduction in formula pension on voluntary early retirement after 30 years of service.

(4) Pension benefits to be based on the best 36 months of service instead of the present 60 months of service.

(5) The present 1.3% and 2% formula be changed to a true 2% formula for all years of service.

(6) Reopening of the Railway Pension Plans to permit retroactive participation by employees.

JOB SECURITY - TECHNOLOGICAL, OPERATIONAL, ORGANIZATIONAL CHANGE

The Unions party to this notice are desirous to amend and improve the existing Job Security, Technological, Operational, Organizational change agreement. Negotiations for such changes shall be in concert with the National wages and rules negotiations and specific request for amendments shall be submitted in due course.

EMPLOYMENT SECURITY

A. The number of employees covered by the collective agreement be established as that minimum as at December 31, 1978. Subject to the following exceptions:

(1) The employment level may be reduced each year to a maximum of 1% in each department, provided this is accomplished through death, retirement, or resignation of those employees leaving the service of the Company.

(2) Employees with less than two years' service could, in addition be laid off, subject to such employees being paid a supplemental benefit, which, when added to U.I.C. entitlement, would equal their wage rate at the time of layoff.

B. The railways and their departments will submit to the Union prior to Jnauary 1, of each year, a detailed report and timetable of any changes in their operations they wish to introduce in that year. This report will include but not be limited to the following:

Estimates of the number of jobs expected to be created and their geographic location.

Estimates of the number of jobs expected to be reduced and their geographic location.

Estimates of the number of employees eligible for retirement.

Estimates of the number of employees with less than two years' service who may be required to be laid off

under the Employment and Income Security Program (now called the Job Security Plan.)

Estimates of the number of employees, with more than two years' service, who may require retraining or other action necessary to ensure their continued employment with the railways or their departments.

C. No contracting out of work until the requirements of the Employment Security Plan are fully met and complied with.

D. A senior union-management manpower committee to be established to implement and monitor the Employment Income and Security Plan, and this will include subsidiary manpower committees to be set up at the departmental level to oversee the practical aspects of such implementation and monitoring at such levels.

SICK LEAVE

All employees shall be entitled to 10 days leave of absence with pay per year to be used as follows:

(a) incidental absence from work due to illness

(b) the 3 day waiting period not covered by Weekly Indeminity.

If an employee has not used the 10 days leave of absence for either (a) or (b) above, all or the remaining days shall be paid as an additional payment in December of the current year.

CONTRACTING OUT

All existing Collective Agreements shall be amended to provide that work performed by employees coming within the scope of such agreement shall not be contracted out and shall not be performed by non-schedule employees or supervisory personnel.

EMPLOYEE BENEFIT PLAN

Weekly Indemnity:

Effective January 1, 1979, weekly indemnity benefits shall be paid at the rate of 80% of basic salary with a minimum to be determined after any wage adjustments as a result of this notice are made.

Medicare Allowance:

Effective January 1, 1979, the Medicare allowance shall be increased to $42.00 per employee, per month, to cover basic hospital, medical and surgical benefits for employees covered by this notice.

Life Insurance:

Effective January 1, 1979, Life Insurance coverage shall be increased to provide $20,000.00 for active employees and $10,000.00 for retired employees and include a provision for long term disability insurance, amend rule to provide that eligibility for life insurance for retirees be age 55 instead of age 60.

Dental-Orthodontic-Drug and Vision Care Plan:

A dental-orthodontic-drug and vision plan shall be implemented at the earliest possible date to cover all employees and their families represented by the Unions party to this notice. The cost of such Plan to be fully paid by the Companies.

In provinces where such coverage is provided in whole or part by legislation, the Company shall remit to each employee, each month, an allowance equivalent to the cost of such coverage.

VACATION

(a) Three weeks after 3 years of service. Four weeks after 10 years of service. Five weeks after 18 years of service. Six weeks after 25 years of service. Plus 1 day for each year of service over 25 years.

(b) Deletion of Company's option to schedule, or pay for, vacation in excess of 5 weeks.

(c) All agreements to contain a provision stipulating that an employee shall, at his option, elect to take vacation pay based on his earnings for the previous year or whichever is greater, as follows:

Two weeks' pay or 4%. Three weeks' pay or 6%. Four weeks' pay or 8%. Five weeks' pay or 10%. Six weeks' pay or 12%.

(d) A vacation bonus of 15% of vacation pay.

(e) The 250 days qualification requirement for vacation purposes shall be eliminated and a more appropriate qualification schedule be implemented.

(f) Employees called for jury duty which conflicts with vacation will have vacation re-scheduled at their request.

BEREAVEMENT LEAVE

All agreements shall be amended to add: brothers-in-law and sisters-in-law, grandparents and grandchildren and to increase bereavement leave period to five (5) days. All agreements shall be amended to provide that when a bereavement occurs during vacation or on general holidays, bereavement leave will be granted in addition thereto.

PROTECTIVE CLOTHING

All agreements to include a protective clothing clause which would provide that the Company supply the necessary clothing or in lieu of, a clothing allowance.

BILINGUALISM

All agreements shall be amended to provide that: no position will be established or designated as being a position requiring a knowledge of the two official languages without prior agreement with the Union. Any such position so agreed to, shall be paid a premium rate as negotiated by the Union.

VIA RAIL PASSES

The policy of issuing passes on major railways to be improved and extended to Via Rail Canada.

NEGOTIATIONS DURING TERM OF THE AGREEMENT

Article III of the Master Agreement dated April 28, 1978 shall be included in subsequent Master Agreement negotiated as a result of this notice.

Any rules and practices that are more favourable than those requested in this notice, shall be retained.

GENERAL HOLIDAYS

All agreements shall be amended to provide for 2 additional General Holidays.

Qualifications for Holiday Pay, shall be amended to provide "an employee who performs service in the pay period in which the holiday falls, shall be entitled to holiday pay."

TRAINING ALLOWANCE

When an employee is called upon to train another employee, the employee will be paid $10.00 per day in

addition to the normal rate of pay for his regular position.

AUTOMOBILE ALLOWANCE

Automobile mileage allowance to be increased to 20¢ per kilometer.

The Company will assume the cost of any additional insurance required for the use of personal automobile.

The Company will pay the cost of drivers licenses for employees operating Company vehicles.

PICKET LINES

An employee shall not be discharged or otherwise disciplined for:

(a) refusing to cross a picket line which is recognized by the appropriate union.

(b) refusing to handle goods that are shipped from strikebound companies, when such strike is recognized by the appropriate union.

COVERAGE

Coverage clause of any agreement negotiated, shall provide that all employees who performed any service in the contract period, shall be entitled to all wages and benefits contained in that agreement.

TERMINATION AND RENEWAL

Each Collective Agreement covered by this notice, shall remain in effect for 1 year from the termination date of the previous agreement, and shall be subject to 3 months notice by either party for renewal, in accordance with the provisions of the Canada Labour Code.

It is requested that this matter be dealt with in joint conference and on National basis with the Railways who were parties to the Master Agreement dated April 28, 1978 between those railways and their non-operating employees, and those employees of Canadian Pacific Express represented by Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees. The Organizations party to this notice are listed hereunder:

Brotherhood of Maintenance of Way Employees

Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees

Canadian Brotherhood of Railway, Transport and General Workers

Brotherhood of Railroad Signalmen

United Telegraph Workers

SALARIES

Le 1 janvier 1979, tous les taux de salaire en vigueur au 31 décembre, 1978 pour les employés représentés par les Syndicats associés des cheminots sédentaires seront majorés d'un montant incorporant les hausses suivantes:

Premièrement; Toutes les augmentations de taux de salaire à compter du ler janvier 1978 seront modifiées pour tenir compte du rajustement en fonction du coût de la vie pour 1978 au montant non prévu dans les ententes de 1976-1977.

Deuxièmement; Une hausse pour éliminer les injustices créés dans le passé afin que les taux de salaire soient ramenés au niveau approprié.

Troisièmement; Une augmentation pour assurer que tous les employés représentés par le présent groupe obtiennent leur juste part de l'augmentation du produit national réel; cette augmentation sera égale à l'augmentation à long terme de la productivité par homme-heure.

Quatrièmement; une augmentation pour assurer que tous les employés représentés par le présent groupe soient pleinement protégés contre les effects de l'inflation sur leurs salaires.

ALLOCATION DU COUT DE LA VIE

Une allocation du coût de la vie sera incorporée à la convention afin de garantir pleinement la protection du salaire réel.

Une normalisation des taux de salaire de tous les opérateurs de véhicule, au taux le plus élevé.

SURTEMPS

Toutes les conventions collectives seront modifiées pour accorder "le taux double pour toutes les heures de surtemps qui sont présentement rémunérées au salaire majoré de moitié."

Toutes les conventions collectives seront modifiées pour accorder une paye de rappel de minimum de 4 heures au taux de surtemps applicable.

PRIME D'EQUIPE

A compter du ler janvier 1979, la prime d'équipe en vigueur sera portée de 15¢ à 25¢ et de 20¢ à 30¢ pour toutes les heures de travail des équipes d'après-midi et de nuit. Ces primes seront intégrées au calcul de la paye de surtemps, et elles s'appliquerong à tous les employés qui font l'objet du présent avis.

PENSIONS

(1) L'indexation automatique de toutes les pensions versées pour les rajuster selon les augmentations du coût de la vie.

(2) Des prestations élevées à 75% pour les survivants des retraités.

(3) Aucune modification dans l'application de la formule de pensions dans les cas de retraite volontaire prématurée apreès 30 ans de service.

(4) Les prestations seront basées sur les 36 mois de service les mieux rémunérés au lieu des 60 mois actuellement requis.

(5) La formule de 1.3% et 2% actuellement en vigueur sera modifiée à une formule réelle de 2% pour toutes les années de service.

(6) La réouverture des régimes de retraite pour permettre la participation des employés qui ne participent pas à l'heure actuelle.

SECURITE D'EMPLOI - CHANGEMENTS D'ORDRE TECHNOLOGIQUE, D'EXPLOITATION ET D'ORGANISATION

Les Syndicats parties à cet avis désirent modifier et améliorer l'Entente de sécurité d'emploi - changements d'ordre technologique, d'exploitation et d'organisation actuellement en vigueur. Les négociations en vue de tels changements se dérouleront en même temps que les négociations nationales sur les salaires et les clauses normatives. Les demandes de modifications seront présentées en temps et lieu.

SECURITE D'EMPLOI

A. Le nombre d'employés couverts par l'entente collective sera établi comme le nombre minimum à partir du 31 décembre 1978. Le tout sous réserve de exceptions suivantes:

(1) Le niveau d'emploi peut être réduit chaque année de 1% au plus dans chaque départment, pourvu que cette réduction provienne du décès, de la retraite ou de la démission des employés quittant le service de la compagnie.

(2) De plus, les employés ayant moins de deux ans de service pourront être mis à pied et ceux-ci recevront une indemité supplémentaire laquelle sera ajoutée à leurs prestations d'assurance-chômage, les deux ensemble égaleront le taux de salaire de l'employé avant sa mise à pied.

B. Avant le ler janvier de chaque année, les compagnies ferroviaires et leurs départements seront tenus à soumettre un rapport détaillé et un horaire de toutes modifications d'exploitation que la compagnie désire soumettre cette année là. Ce rapport incorporera mais ne se limitera pas aux points suivants:

une êvaluation du nombre de nouveaux emplois anticipés et leur situation géographique,

une évaluation du nombre d'emplois qui seront éliminés et leur situation géographique,

une évaluation du nombre d'employés éligibles à la retraite,

une évaluation du nombre d'employés ayant deux ans de service ou moins, qui pourraient être mis à pied sous le Régime de sécurité d'emploi et du revenu (maintenant devenu le Régime de sécurité d'emploi).

une évaluation du nombre d'employés ayant deux ans de service ou plus qui auraient besoin d'une rééducation professionnelle ou de toute autre action nécessaire afin de leur assurer un emploi continu dans les compagnies ferroviaires ou leurs départements.

C. Aucun travail ne sera accordé en sous-traitance avant que les exigences du régime de sécurité d'emploi ne soient entièrement rencontrées et respectées.

D. L'établissement d'un comité de la main-d'oeuvre patronal-syndical au niveau supérieur qui se chargera de la mise en oeuvre et du contrôle du régime de la sécurité d'emploi et du revenu, qui englobera des comités auxiliaires établis au niveau départemental qui seront responsables de la surveillance des aspects pratiques de la mise en oeuvre et du contrôle à ces niveaux.

CONGE DE MALADIE

Tous les employés seront éligibles à dix jours de congé autorisé rémunéré par an qui seront utilisés comme suit:

(a) une absence imprévue due à la maladie;

(b) les 3 jours d'attente non-couverts par l'indemnité hebdomadaire;

Si un employé n'utilise pas le 10 jours de congé de maladie pour les raisons prévues ci-haut, les jours non-utilisés ou en entier lui seront payés en forme de versement supplémentaire au mois de décembre de l'année courante.

SOUS-TRAITANCE

Toutes les conventions collectives en vigueur seront modifiées pour assurer que le travail exécuté par les employés régis par une des conventions ne sera pas accordé en sous-traitance et ne sera pas exécuté par des employés non-affectés ou par le personnel de cadre.

REGIME DE PREVOYANCE POUR LES EMPLOYES

Indemnité hebdomadaire: A compter du ler janvier 1979, les prestations d'indemnité hebdomadaire seront versées à raison de 80% du salaire de base avec un minimum à être déterminé à la suite de tout rajustement de salaire à la suite du présent avis.

Allocation d'assurance-maladie: A compter du ler janvier 1979, l'allocation d'assurance-maladie passera à $42.00 par employé, par mois, pour couvrir les prestations de base de soins hospitaliers, médicaux et chirurgicaux des employés qui font l'objet du présent avis.

Assurance-vie: A compter du ler janvier 1979, la protection d'assurance-vie sera portée à $20,000 pour les employés actifs, et à $10,000 pour les retraités et comportera une disposition d'assurance-incapacité à long terme. Un amendement au réglement qui assurera que l'âge d'éligibilité de retraite soit réduit de 60 à 55 ans.

Régime de soin dentaire, pharmaceutique, orthodontique et oculaire:

Un régime de soin dentaire, orthodontique, pharmaceutique et oculaire sera mis en oeuvre le plus tôt possible afin protéger tous les employés et leurs familles représentés par les syndicats signataires du présent avis. Le coût d'un tel régime sera payé en entier par les compagnies. Dans les provinces où pareille protection est fournie en tout ou en partie par la loi, la compagnie devra remettre à chaque employé, chaque mois, des allocations équivalentes au coût de cette protection.

VACANCES:

(a) Trois semaines après 3 ans de service. Quatre semaines après 10 ans de service. Cinq semaines après 18 ans de service. Six semaines après 25 ans de service et une journée de congé additionnelle pour chaque année de service au-delà de 25 ans.

(b) Enlever l'option de la Compagnie de céduler ou de payer les vacances en excès de 5 semaines.

(c) Toutes les conventions collectives seront modifiées pour prévoir qu'un employé peut choisir de se faire payer ses vacances selon un pourcentages des gains de l'année précédente ou un per diem selon ce qui est le plus avantageux, comme il suit:

Deux semaines de salaire ou 4%. Trois semaines de salaire ou 6%. Quatre semaines de salaire ou 8%. Cinq semaines de salaire ou 10%. Six semaines de salaire ou 12%.

(d) Une prime de vacances de quinze pour-cent de la paye de vacances.

(e) Les 250 jours de travail requis pour avoir droit aux vacances seront éliminés et un jeu de conditions d'admissibilité plus convenables sera appliqué.

(f) Les employés appelés à faire partie d'un jury durant une période qui entre en conflit avec leurs

vacances annuelles, pourront, sur demande, établir un autre horaire de vacances.

CONGES GENERAUX

Toutes les conventions collectives seront modifiées pour accorder 2 congés généraux.

L'admissibilité à la paye de congé devra être modifiée, pour prévoir qu'un employeé qui travaille dans la période de paye durant laquelle tombe le congé, aura droit à une paye de congé.

ALLOCATION DE FORMATION EN MILIEU DE TRAVAIL

Quand un employé est appelé à enseigner à un autre employé en milieu de travail, il sera payé $10.00 par jour en sus de son taux de salaire régulier du poste qu'il occupe.

ALLOCATION D'AUTOMOBILE

L'allocation d'automobile sera haussée à 20¢ le kilometre.

La compagnie payera le coût de toute assurance additionnelle requise pour l'utilisation de l'automobile personnelle.

La compagnie payera le coût des permis de chauffeur des employés qui utilisent des véhicules de la compagnie.

LIGNES DE PIQUETAGE

Un employés ne sera pas congédié et ne sera pas passible de mesures disciplinaires pour les raisons qui suivent:

(a) s'il refuse de franchir une ligne de piquetage légale reconnue par le syndicat,

(b) s'il refuse de manier toute marchandise en provenance d'une compagnie en grève, quand telle grève est reconnue par le syndicat.

CONGES DE DEUIL

Toutes les conventions seront modifiées pour ajouter: Beaux-frères, belles-soeurs, grands-parents et petits-enfants. Que la période de congé de deuil soit augmentée à 5 jours.

Toutes les conventions serront modifiées pour prévoir que lorsqu'un deuil survient durant les vacances ou un congé général, le congé de deuil sera accordé en plus.

VETEMENTS SECURITAIRES

Toutes les ententes collectives seront modifées pour prévoir une clause de vêtements sécuritaires obligeant la compagnie à fournir les vêtements nécessaires sinon une allocation à cet effet.

BILINGUISME

Toutes les conventions seront modifiées pour assurer que: aucun emploi ne sera établi ou désigné comme un emploi exigeant une connaissance des deux langues officielles sans entente au préalable avec le Syndicat. Lorqu'on aura ainsi convenu d'un poste, celui-ci donnera driot à une prime négociée par le syndicat.

PASSES-VIA RAIL

On recommande que le système de passes actuellement accordé aux employés soit amélioré et appliqué au réseau VIA RIAL CANADA.

LES NEGOCIATIONS DURANT LA DUREE DE LA CONVENTION

L'article III de la convention collective cadre en date du 28 avril 1978, sera incorporé dans une convention collective subséquente qui sera négociée à la suite du présent avis.

Tout règlement ou pratique qui est plus favorable que celle exigée dans le présent avis sera retenue.

CHAMP D'APPLICATION

La clause couvrant le champ d'application de toutes ententes négociées, prévaudra à tout employé occupant un poste durant la durée de l'entente, les salaires et prestations prévus dans le contrat.

TERME DE RENOUVELLEMENT

Toutes les ententes collectives visées par cet avis, resteront en vigueur pour une année, à partir du terme de l'entente précédente, et par la suite seront sujettes à 3 mois de préavis par l'un ou l'autre des parties de leur désir de les renouveler, en vertu des dispositions du Code du Travail du Canada.

On recommande que le contenu de cet avis soit négocié au cours d'une conférence mixte sur une base nationale avec les chemins de fer signataires de la convention collective cadre en date du 28 avril, 1978 entre ces sociétés de chemins de fer et leurs employés sédentaires, et celles des employés du C.P. Express représentés par la FCCFA.

Les organisations qui souscrivent au présent avis sont les suivantes:

Fraternité des préposés à l'entretien des voies.

Fraternité des Commis de Chemins de Fer, de Lignes Aériennes et de Navigation, Manutentionnaires de Fret, Employés de Messageries et de Gares-

Fraternité canadienne des cheminots, employés des transport et autres ouvriers.

Fraternité des signaleurs des chemins de fer.

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Bates' Commentary

The motoring public of the United States suffered a serious setback to their safety on September 28, 1978. The October 4, 1978 Federal Register published that:

"The purpose of this notice is to terminate a rulemaking proceeding initiated by FRA to determine the need for mandatory Federal standards governing the installation, maintenance, operation, inspection and testing of highway grade crossing warning devices. This action is prompted by a recent review of accident statistics by FRA which indicated that the adoption of mandatory Federal standards cannot be justified at the present time."

The notice terminated the proceeding initiated with the Federal Railroad Administration jointly by the Brotherhood of Railroad Signalmen and a committee of the Association of American Railroads on June 28, 1976. FRA justifies the termination by referring to accident statistics compiled by that agency which were referred to as "miscoded" or inaccurate.

In discussion of comments received regarding this rulemaking FRA points out that:

"In the ANPRM, FRA stated that its preliminary analysis of the accident/incident reports submitted by carriers indicated that there were 12,130 accidents at grade crossings during 1975. Of this total, 6,863 occurred at grade crossings where warning devices were installed. The following table, which was included in the ANPRM, indicated that 192 warning devices were not operating when accidents occurred.

"A number of commenters challenged the accuracy of the statistics presented in the ANPRM table. For example, the AAR concluded that, if its research were accurate, the percentage of grade crossing accidents involving nonoperating protective devices may be as low as two-tenths of 1% of the total number of accidents occurring at protected grade crossings. AAR contends that this percentage 'approaches the limit of what can realistically be expected of men and machines.' "

Type	Number of accidents	Not Operating when accident occurred
Gates with flashing light signal	978	41
Cantilever with flashing light signals	428	11
Standard flashing light signals	3,771	99
Wig-wag signals	318	11
Audible devices	1,368	30
Total	**6,863**	**192**

FRA concludes their comments by stating that:

"Finally, it should be noted that most of the Nation's railroad-highway grade crossings are now protected by passive warning signs only. Active warning devices provide considerably more protection at grade crossings than do the more prevalent passive warning signs. Since active warning devices are designed to 'fail safe,' they very rarely experience mechanical failure in other than a 'fail safe' mode. Therefore, FRA believes that installation of more active protective devices would be much "more beneficial from the standpoint of safety than a Federal regulation requiring expenditure of additional resources to maintain and test those devices."

It is difficult to understand how the installation of additional devices which will not have a maintenance and testing requirement can be more beneficial than expending funds to be certain that the devices already installed are actually performing their intended function.

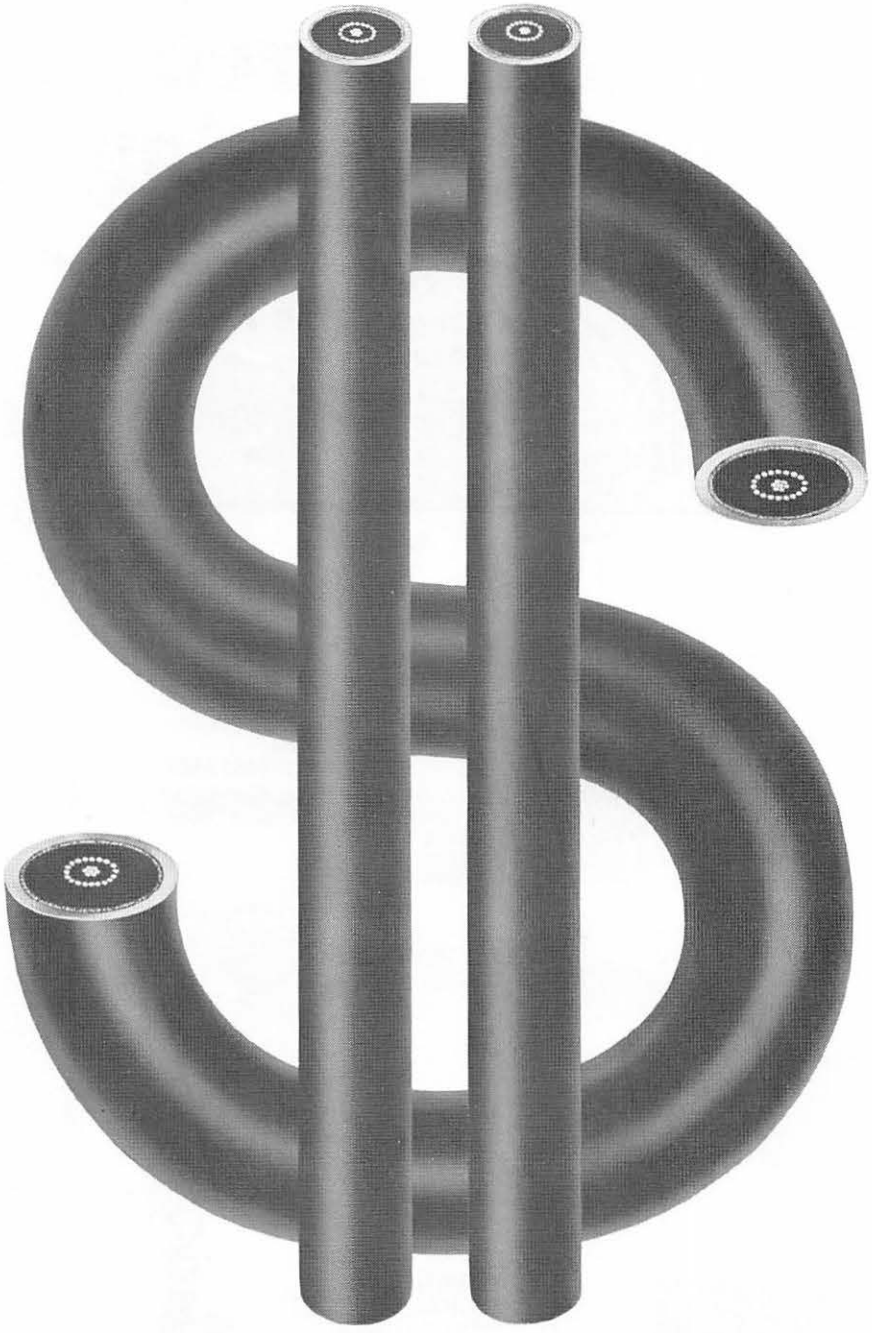
Statements have been made which indicate that railroads have more stringent standards for the installation, inspection, maintenance and testing of these devices than were proposed to FRA by the joint committee. If that is the case, it cannot be contended that the proposed rules would require additional expenditures.

I believe it is time for the FRA to perform its intended function and to protect the public from hazardous conditions at grade crossings by implementing the referred to standards.

I further believe action should be taken by the Department of Transportation to provide funds from the highway trust fund for the maintenance of the grade crossing protective devices. In most cases the railroad was in place long before the street or highway.

This matter is not closed so far as the Brotherhood of Railroad Signalmen is concerned.

Tom Bates



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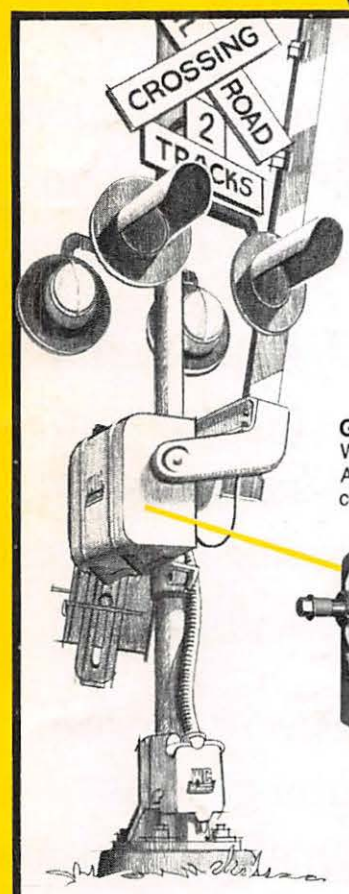

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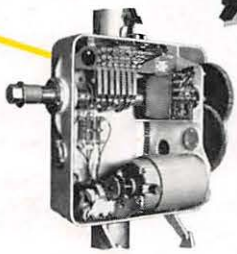

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